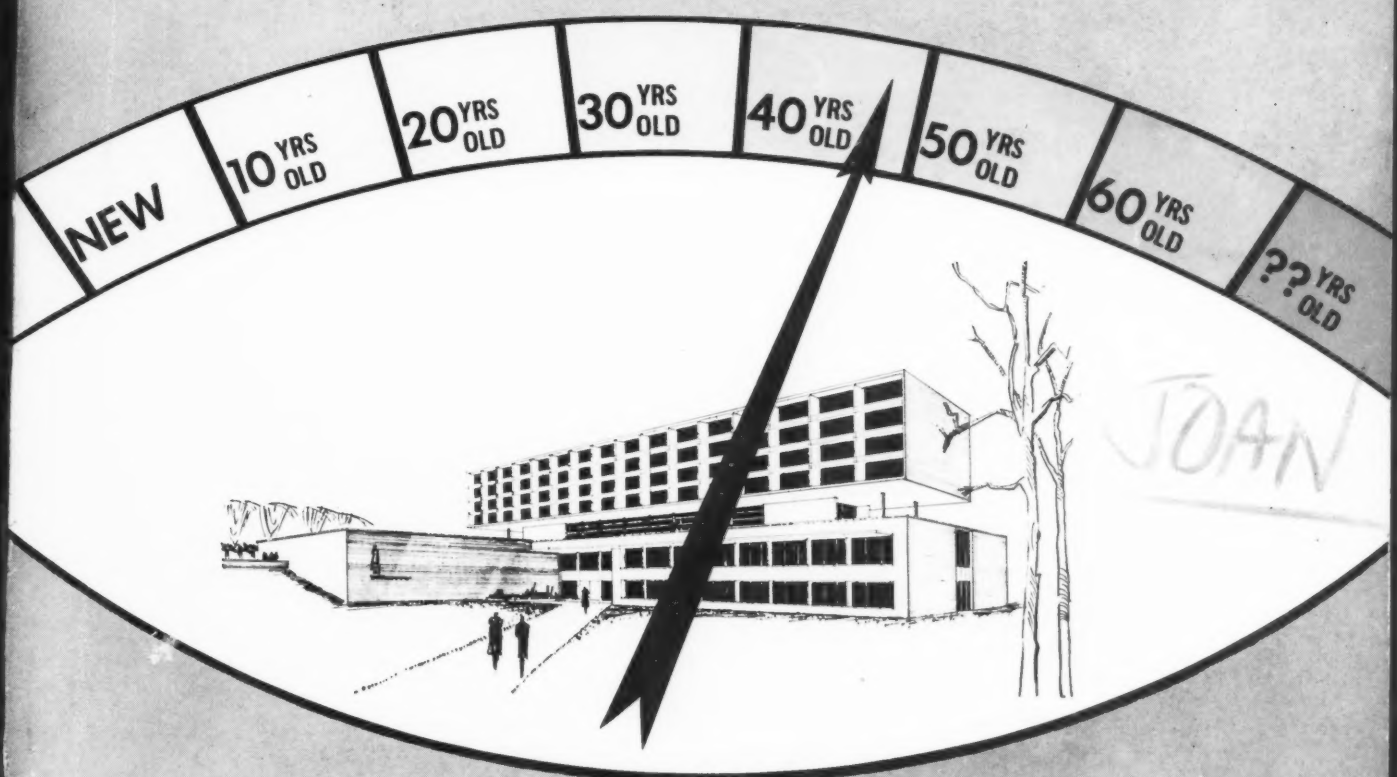
Hospital Topics

TODAY'S HOSPITAL PRACTICES



THE AGING HOSPITAL

PAGE 53

New Hospital Digest Section

PAGE 19

JANUARY 1961

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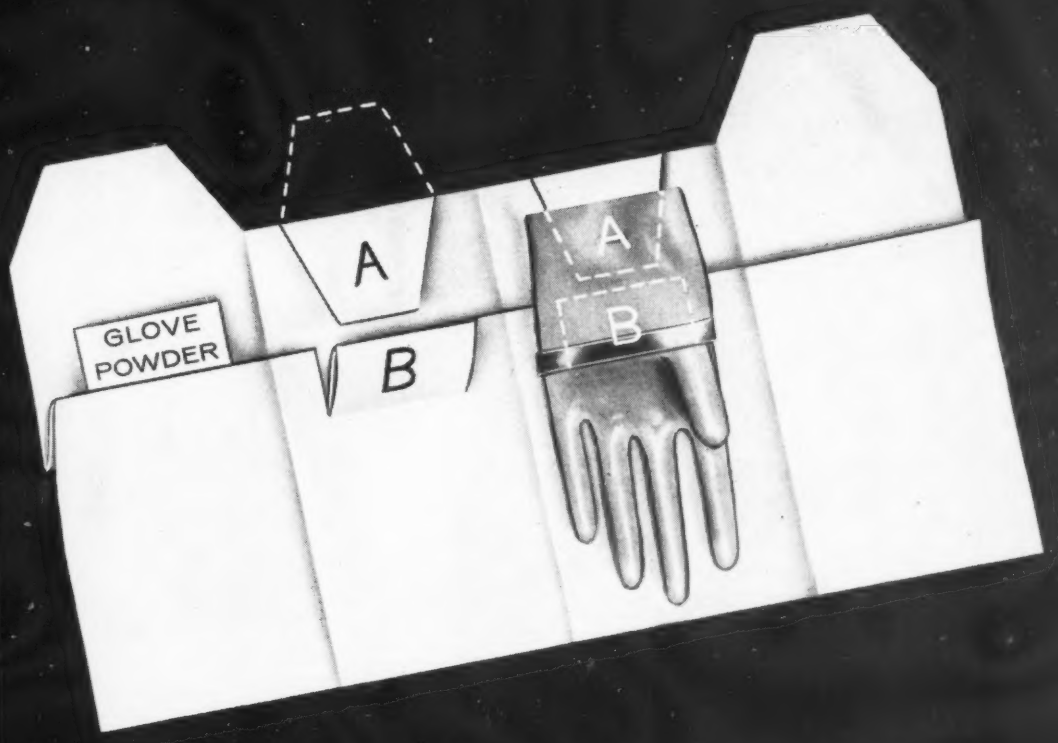

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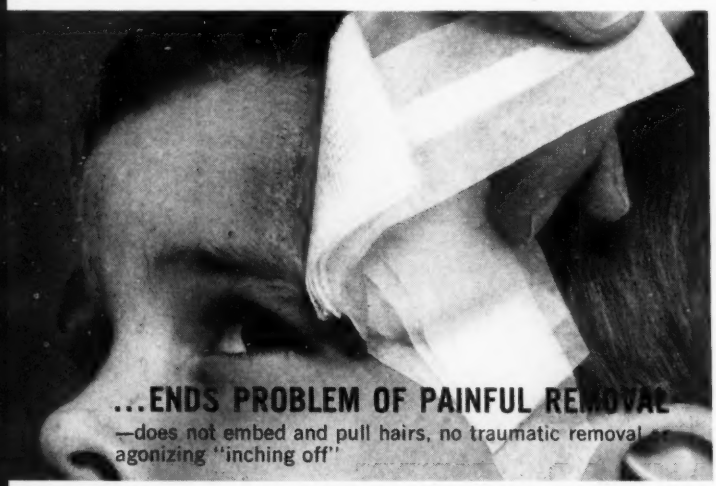

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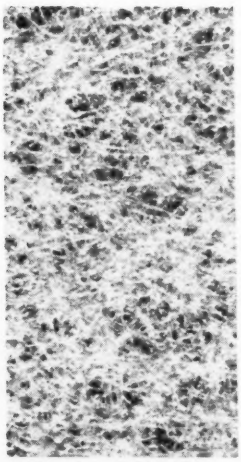

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HOSPITAL Topics

JANUARY, 1961, VOL. 39, NO. 1

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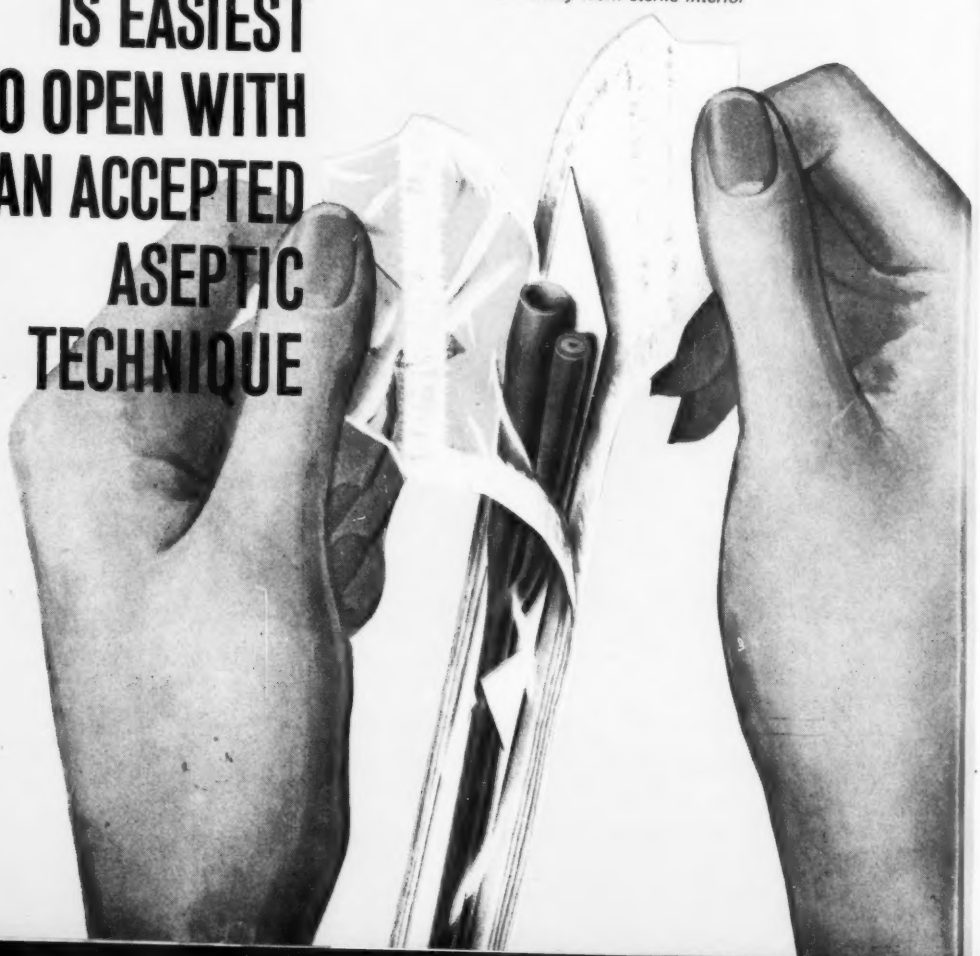

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staph newsletter

TENTH OF A SERIES WITH SIGNIFICANT SUGGESTIONS FOR CONTROLLING CROSS INFECTIONS

HERE it is the season again to be on the alert against spread of flu and flu-like illnesses which, all too frequently, lead to staphylococcal pneumonia and death in high-risk patients. Although the influenza epidemic wave of the first three months of 1960 was not as severe as the Asian-flu winter of 1957-1958, the USPHS still considers that it caused 26,000 excess deaths during the period. Of these, 80% were in patients over 65 years old and 90% were attributable either to pneumonia-influenza or complications of renocardiovascular diseases. Unlike many viruses, the influenza virus can and does persist for days in virulent form in the environment unless destroyed by intensive disinfection measures.

Last month, when we first told you about our new Amphyl® Spray Disinfectant and Deodorant, we were so intent on its convenience and effectiveness as a spot disinfectant and air deodorant that we forgot to mention one of its very good features. This is that it does not leave an oily or sticky residue. To demonstrate this, one of our technical representatives applies Amphyl Spray to his white shirt cuff! For surfaces, you can demonstrate it on a glass door or mirror—but why not spray it right on to a door handle or bed side table where it can go to work as the disinfectant it is? Would you like our descriptive folder and bacteriologic reports on Amphyl Spray? If so, please write us.

"Staphylococcal enteritis or staphylococcal diarrhea among our hospitalized patients is a source of concern to us, since we do not know its exact relation to potentially fatal pseudomembranous enterocolitis, to the possible role of intestinal staphylococci in serving as a reservoir for staphylococcic infection of other patients in our hospitals, or to the transfer of these intestinal organisms to other parts of the body where their presence may present serious problems, such as wound infections, pneumonia and septicemia."

Drs. Dearing and Needham of the Mayo Clinic and Mayo Foundation made the above comments after a two-year study of 243 consecutive, hospitalized patients whose stool cultures revealed the presence of Staph. aureus. (J.A.M.A., Nov. 19, 1960) Although none of the seven stated purposes of this study was evaluation of the extreme dangers of cross infection, awareness of this potential is evident throughout the report.

In the care of such patients, aseptic housekeeping measures are essential to help avoid autoinfection of the patient, spread of organisms to other patients, and infections of personnel. Thorough disinfection of floors and equipment, as well as linens and blankets, is dependably accomplished with any one of the L&F refined phenolic disinfectants—Amphyl®, O-syl®, and Lysol® disinfectants or Tergisyl®, our detergent-disinfectant. As you know, all are widely microbicidal, including staphylocidal, pseudomonacidal, tuberculocidal and fungicidal. Specific recommendations for using each product are available for individual or group instruction. If you need multiple copies for teaching purposes, just let us know. We'll be glad to send them.

If you're wondering whether it's still important for a disinfectant to be a tuberculocide, consider this statistic from the Virginia Public Health Department. In the years 1957 to 1959, 42% of the tuberculous individuals who died were first identified as such on the death certificate.

Many long-range reports now being published confirm that, in most hospitals, staph infection exists at an endemic level. Goal of contamination control measures is to lower that level and to prevent emergence of epidemics or, should they occur, to curtail them quickly. Isolating patients admitted with staph infections, as well as those developing staph infections after admission, is now widely recommended. Frequently, the success of such units in preventing spread of infectious organisms throughout the hospital depends upon specific and dependable disinfection procedures within the isolation unit. *Use of Amphyl® on floors, walls, furniture and fixtures and in laundering blankets, linens, and curtains will destroy these offending organisms. Our new literature covers specific instructions for Amphyl disinfection of isolated units. Bacteriologic data is, of course, included. May we send it to you?*

℞ for eliminating staphylococci from 50 blankets: add 1 gallon of Amphyl® to 100 gallons of water, rotate for 3 minutes, soak for 10 minutes, add soap or detergent and follow usual washing procedure. If residual antibacterial effect is desired, add 1% Amphyl to last rinse.

If there's any doubt in your mind about the basic role that bactericidal floor cleaning can play in infection control, please write us for a reprint of the article "The Floor As A Reservoir Of Hospital Infections", by Carl W. Walter, M.D., and Ruth B. Kundsin, Ph.D., as published in Surgery, Gynecology & Obstetrics, October, 1960. Graphic comparisons are made between bacterial counts when floor disinfection is done at 30-day intervals and 24-hour intervals. The difference is significant.

Have you a baffling contamination control problem in your hospital on which we might help? Although we realize that disinfection is only one part of the complete control program, as you know, it is an important one. Our research laboratories and technical advisers are ready to help and I, personally, would like very much to hear from you.

Charles F. Manz
General Sales Manager
Professional Division

LEHN & FINK PRODUCTS CORPORATION
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THIS MONTH IN HOSPITAL Topics

- Hospitals have sometimes grown like Topsy, and sometimes their growth has matured into obsolescence, and even outright danger, as our cover this month graphically charts this process. Sigmund L. Friedman, M.D., explores the subject of obsolescence in a down-to-earth discussion of what he calls an inevitable situation—"the Aging Hospital; Problems and Remedies" (p. 53).

- Beginning with this issue, TOPICS brings you the Hospital Digest section —a feature which will be appearing regularly in months to come. Containing condensations of articles dealing with numerous hospital subjects, this section is specially designed for those who want diversity of information— but are too busy to read dozens of periodicals each month. TOPICS will do it for you, in the digest section. See p. 19.

- The best-planned systems of men and hospitals, say Arthur H. Dilly and Ivan Belknap, can go astray without good middle management personnel. No management system can substitute for men; no mediocre department head or supervisor can effectively accept the delegation of responsibility necessary in hospital organization today, the authors claim. See p. 55.

- A missing projector—later discovered to have been stolen—was the first link in a chain which ended with the establishment of a complete inventory control system of capital items at Saginaw (Mich.) General Hospital. Garrett Russell Graham's step-by-step story of how the system came about won TOPICS' second prize in our recent editorial competition. You'll find it on p. 46.

- In the first of two parts, TOPICS presents a thorough and sensitive account of the Vineland, N. J., Training School for the mentally retarded—its operation, its thoughts, and its vision. (See pediatrics section, p. 101.)

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Now available in a new wrist style—without beaded edge—color-banded Wilson Gloves are better than ever. They slip on more easily, fit the wrist more comfortably, show less tendency to roll down in use. And with exclusive curved fingers that follow natural hand conformation, Wilson Surgeons' Gloves are unsurpassed in fit and comfort.

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HOSPITAL Topics
The News Magazine for the Hospital Staff

JANUARY, 1961
VOL. 39, NO. 1

Scanning the News

Man's Best Friend Can Make You Sick

If your pet is given a physical checkup once a year by a veterinarian, you may be keeping yourself out of the hospital. Household pets can infect humans with numerous ailments ranging from skin rashes to rabies.

James H. Steele, D.V.M., chief Public Health Service veterinarian, Communicable Disease Center, Atlanta, explains that more and more animal germs are adapting themselves to man. So far, 24 dog and 12 cat diseases have made the grade.

One of the most dangerous carried by both animals is toxoplasmosis, caused by a parasite which often attacks the central nervous systems of unborn babies. Afflicted infants may be born with encephalitis. How the parasites travel from pets to expectant mothers is still a mystery.

Visceral larva migrans is also dangerous. Caused by a worm that cats and dogs eliminate through their digestive systems, the disease most frequently attacks children who play on contaminated ground.

Dogs and cats aren't the only disease carriers among pets. Some varieties of birds can communicate psittacosis to humans, causing nausea and fever, and general pneumonia in severe cases.

Dr. Lee Salk (l.), psychologist, demonstrates his new device, designed to help infants sleep better by giving them the security of the mother's heartbeat they "heard" in the womb and feel in their mothers' arms. The device is placed next to the baby's crib or bassinette and reproduces the heartbeat sound at the level of soft conversation. With Dr. Salk are Elmer Amerman, M.D. (r), director of pediatrics, City Hospital, Elmhurst, N. Y., and Irving I. Schachtel, president of Sonotone Corporation, which will manufacture the instrument.

Brain Block Stops "Intention Tremors"

A surgical procedure setting up a brain block has stopped "intention tremor" in 10 of 12 patients. The surgery was performed by Irving S. Cooper, M.D., professor of research surgery, New York University.

When victims of "intention tremor" are at rest there is often no tremor. The tremor starts when they make the first move of an intention to do something. The tremor in arms and legs becomes violent when they push the intention and are rendered helpless.

The surgery technic involves deliberately damaging selected parts of the brain. A small opening is made in the skull, and a tube with a balloon at the end is inserted in the thalamus. The balloon is inflated and damaging chemicals are passed to the part through tube and balloon.

By temporarily blocking several impulse pathways, the conscious patient is used as a check to determine which pathway is transmitting the tremor-causing impulses. This one is then permanently blocked with chemical damage.

Trampoline Amateurs Get it in the Neck

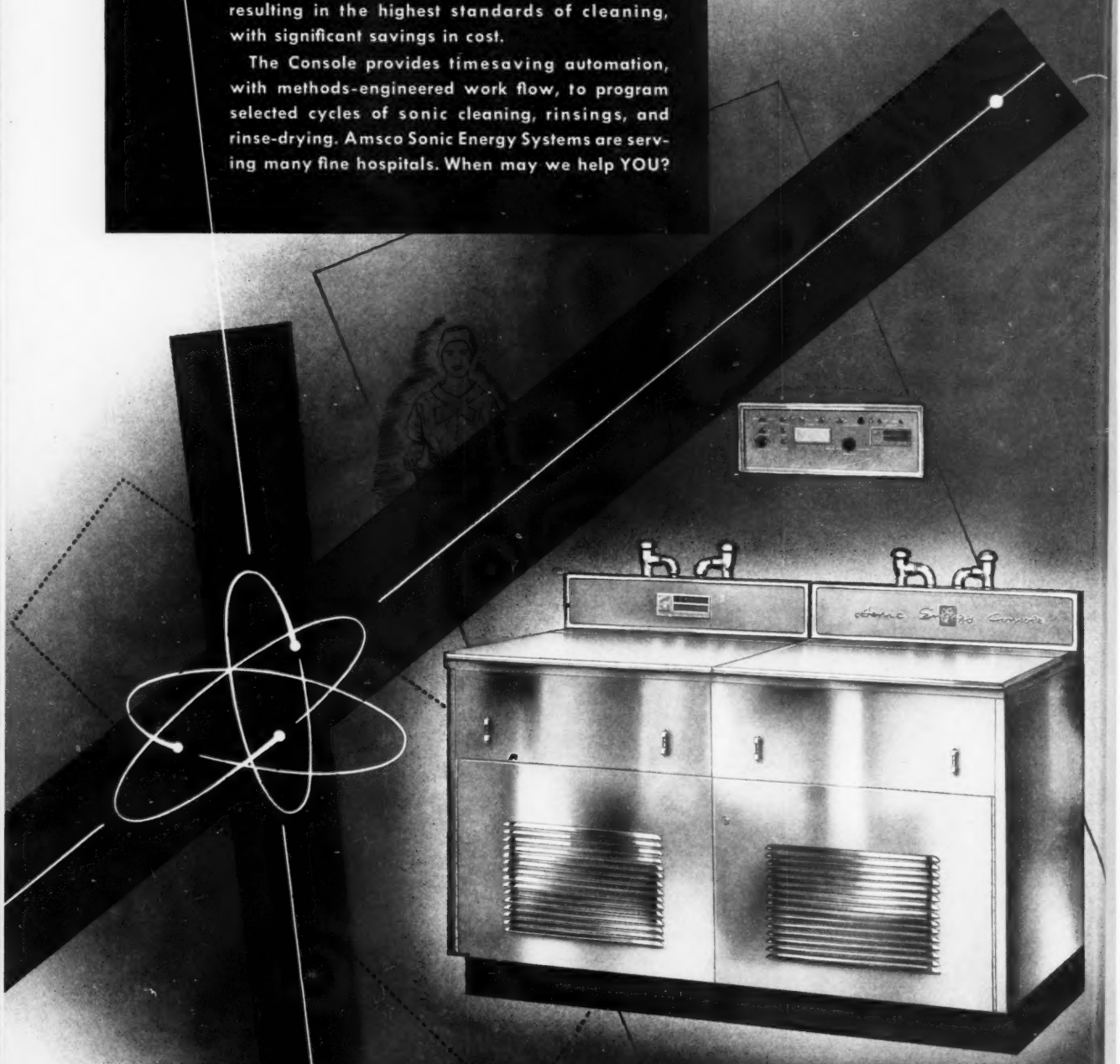
That untrained amateur bobbing on the trampoline is in danger of his life, according to a group of Iowa City doctors, who add that the number of inexperienced trampoline performers has been par-

(Continued on page 75)

The Amsco Sonic Energy System

differs from all others . . . it's the only one designed specifically for hospitals. The advanced features of this compact, all-new Console are directly related to the Amsco Sonic Systems concept . . . resulting in the highest standards of cleaning, with significant savings in cost.

The Console provides timesaving automation, with methods-engineered work flow, to program selected cycles of sonic cleaning, rinsings, and rinse-drying. Amsco Sonic Energy Systems are serving many fine hospitals. When may we help YOU?



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News Briefs at Press Time

SPECIAL EDUCATIONAL PROGRAMS APPROVED FOR NONCERTIFIED FOREIGN PHYSICIANS

Noncertified foreign medical graduates can obtain six-month extensions of their educational visas past the December 31, 1960, deadline if they are enrolled in special educational programs offered by hospitals.

However, they must have been accepted for the April 4, 1961, ECFMG examination by January 4, and they must be removed from all responsibility for patient care.

For further details on these programs, see report on AMA clinical meetings, page 27.

No satisfactory solutions to problem of foreign physicians came out of a special two-day meeting in Washington early in December, attended by representatives of AMA, National Board of Medical Examiners, ECFMG, AHA, and State Department.

State Department made it clear that it believes too many U. S. hospitals are applying for too many visa extensions. It argued that purpose of exchange program is defeated when instead of going home to give improved care to their countrymen, foreign graduates are pressured into staying here by short-staffed hospitals.

WHITE HOUSE CONFERENCE ON AGING OPENS IN WASHINGTON JANUARY 9

The White House Conference on Aging will be held in Washington January 9-12. AMA president-elect Leonard W. Larson, M.D., will lead discussion section on health and medical care. Section on financing of health services, however, will be led by Charles L. Schottland, former social security commissioner and advocate of Forand-type legislation.

Rep. Aime J. Forand, who is retiring from Congress, does not plan to attend the conference. He says he will stay in Washington as "an unpaid lobbyist" for medical care of the aged.

SENATE GROUP RENEWS CAMPAIGN FOR IMPROVING NURSING HOMES

There is a shortage of 127,000 nursing-home beds, and 50 percent of existing 307,681 beds are unacceptable by standards of Hill-Burton Act, according to report issued in December by Senate subcommittee on problems of the aged and aging.

"Not only is it essential that each state undertake an immediate and a vigorous program of enforcing its minimum nursing-home standards, but federal minimum standards should be developed which the states can use as models in preparing and enforcing their own standards," declared subcommittee chairman Sen. Pat McNamara (D., Mich.).

AOA REVOKES CHARTER OF GROUP SEEKING UNITY WITH MEDICS

The American Osteopathic Association has revoked the charter of the California Osteopathic Association because that state group decided to continue negotiations with the California Medical Association toward unification of the two groups.

AOA president Roy J. Harvey, D.O., said the national organization expects to recognize a new state society in California.

At AMA clinical meeting in Washington, New Jersey's delegation asked for clarification of AMA's position on osteopathy, but the House of Delegates passed the buck to the AMA Judicial Council.

MALPRACTICE PREMIUM ALLOWABLE DEDUCTION FOR EMPLOYED DOCTOR

A hospital-employed physician who pays his own malpractice insurance premiums can deduct the costs from his adjusted gross income, Internal Revenue Service has ruled, provided he does not use the tax table or the standard deduction.

Though tax regulations specify that business expenses are not allowable for employed persons, IRS ruled that exception was justified, emphasizing that the hospital-employed doctor is liable to suit for malpractice and is properly entitled to a tax concession if he pays the premiums.

MAJOR CHANGES IN FDA RULES ON DRUG LABELING ADOPTED

Major changes approved by Food and Drug Administration in labeling requirements for drugs in connection with their promotion to physicians include:

Parenteral drug labels must declare quantity or proportion of all inactive as well as active ingredients; identifying lot or control numbers must be shown on all prescription drugs; labeling and promotional literature must give information on any relevant hazards or contraindications; detail men and advertisements shall not make claims for new drugs which go beyond those in permit applications filed with FDA; label information on uses and dosage must show date of issuance or latest revision.

Part of new rules become effective on January 8, remainder on March 9.

BRIEF BRIEFS

—As of December 14, Michigan and West Virginia were only states in which Mills-Kerr program was in operation.

—Under Medicare program, which celebrated fourth anniversary December 7, care has been given to about one million dependent wives and children. Billings approximate $270 million.

—"Interim Report on Health Insurance," a National Health Survey compilation of statistics for period of July-December, 1959, presents data on extent of coverage by hospital, surgical, and medical insurance. It can be purchased for 45 cents from the Superintendent of Documents, Washington, D. C.

Gordon W. Marshall

Calendar of Meetings

JANUARY

8 Puerto Rico Hospital Association, Medical Association Bldg., Santurce

8-13 American Academy of Orthopaedic Surgeons, Hotel Americana, Bal Harbour, Miami Beach, Fla.

9-12 White House Conference on Aging, Washington, D.C.

16-18 American College of Surgeons, Sectional Meeting, Hotel Dinkler-Tutwiler, Birmingham, Ala.

16-19 AHA Institute, Evening and Night Nursing Service Administration, Mayo Hotel, Tulsa, Okla.

16-20 AHA Institute, Nurse Anesthetists, Coronado Hotel, St. Louis

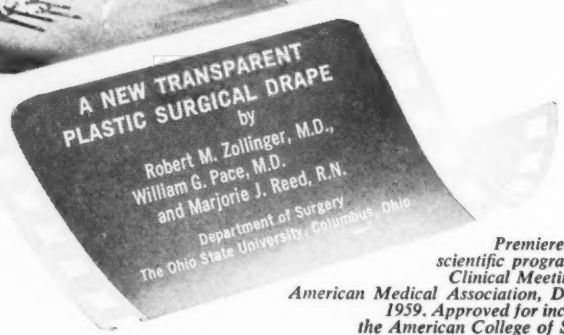
18-20 AHA Institute, Labor Relations, Somerset Hotel, Boston

19-20 Alabama Hospital Association, Whitley Hotel, Montgomery

23-24 National Association of Private Psychiatric Hospitals, Safari Hotel, Scottsdale, Ariz.

New Technic in Surgical Asepsis...

Motion picture now available showing the technic for isolating the operative wound from the patient's own skin in a wide variety of surgical procedures.



Color
Sound
17 minutes
16 mm.

This film demonstrates both the concept and the means of achieving more stringent asepsis.

Suitable for all groups: O.R. nurses, interns, residents, complete surgical staff, hospital staff, Infections Control Committees.

Premiered on the scientific program of the Clinical Meeting of the American Medical Association, December, 1959. Approved for inclusion on the American College of Surgeons' list of approved films.

To schedule a showing, send requests to the Aeroplast Corporation, Station A—Box 1, Dayton 3, Ohio. Please mention a preferred and an alternate date. Would you also like to show a 16 mm., color and sound, film on the use of spray-on plastic surgical dressing? This is available for showing with the above film, or separately, if you prefer.

23-26 American College of Surgeons, Sectional Meeting, Hotels Del Prado, Reforma, Vista Hermosa, El Presidente, Alffer, Continental Hilton, Mexico City

23-27 AHA Institute, Hospital Purchasing, Pick-Nicollet Hotel, Minneapolis

30-Feb. 3 American Protestant Hospital Association, Muehlebach Hotel, Kansas City

30-Feb. 3 Clinical Congress of Abdominal Surgeons, Hotel Americana, Bal Harbour, Miami Beach, Fla.

30-Feb. 3 AHA Institute, Central Service Administration, Somerset Hotel, Boston

31-Feb. 2 National Association of Methodist Hospitals and Homes, Muehlebach Hotel, Kansas City

FEBRUARY

1- 2 American Hospital Association, Midyear Conference of Presidents and Secretaries, AHA Headquarters, Chicago

2- 4 American College of Hospital Administrators, Fourth Annual Congress on Administration, Morrison Hotel, Chicago

4- 7 American Medical Association, Congress on Medical Education and Licensure, Palmer House, Chicago

6- 8 American Academy of Allergy, Statler-Hilton Hotel, Washington, D.C.

8-10 AHA Institute, Community Relations for Hospital Auxiliaries, AHA Headquarters, Chicago

8-10 American Academy of Occupational Medicine, Statler Hotel, Detroit

8-10 Illinois Congress for Maternal and Infant Health, St. Nicholas Hotel, Springfield, Ill.

8-11 American College of Radiology, Drake Hotel, Chicago

9-11 Society of University Surgeons, University of Kansas Medical School, Kansas City

13-15 Association of Operating Room Nurses, Civic Auditorium, San Francisco, Calif.

13-17 AHA Institute, Dietary Department Administration, Biltmore Hotel, Oklahoma City

14-17 American Nurses' Association, Section Regional Conference, Hotel New Yorker, New York City

16-18 Central Surgical Association, Park Plaza Hotel, St. Louis

23-25 Louisiana Hospital Association, Captain Shreve Hotel, Shreveport

23-25 American Academy of Forensic Sciences, Drake Hotel, Chicago

27-Mar. 1 AHA Institute, Management Development, AHA Headquarters, Chicago

27-Mar. 3 AHA Institute, Nursing Service Administration, Rice Hotel, Houston, Tex.

28-Mar. 3 American Nurses' Association, Sectional Meeting, Memorial Coliseum, Portland, Oregon

(Continued on page 14)

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CALENDAR OF MEETINGS

(Continued from page 12)

MARCH

3-16 National Health Council, National Health Forum, Waldorf-Astoria Hotel, New York City

5- 8 American Nurses' Association, Section Regional Conference, Hotel Denver-Hilton, Denver, Colo.

6- 8 AHA Institute, Hospital Law, Commodore Perry Hotel, Austin, Tex.

6- 9 American College of Surgeons, Sectional Meeting for Surgeons and Nurses, Hotels Bellevue-Stratford, Ben Franklin, and Sylvania, Philadelphia

6-10 AHA Institute, Hospital Purchasing, Penn-Sheraton Hotel, Pittsburgh

8-11 Neurosurgical Society of America, Boca Raton, Fla.

12-17 American College of Allergists, Statler Hilton Hotel, Dallas, Tex.

15-18 American Nurses' Association, Section Regional Conference, Hotel Chase-Park Plaza, St. Louis, Mo.

16 Wisconsin Hospital Association, Schroeder Hotel, Milwaukee

20-22 AHA Institute, Personnel Administration (Basic), AHA Headquarters, Chicago

20-23 AHA Institute, Obstetrical Nursing Administration, Statler Hilton Hotel, Los Angeles

20-24 American Surgical Association, Boca Raton Hotel, Boca Raton, Fla.

21-23 Kentucky Hospital Association, Phoenix Hotel, Lexington

23-24 Georgia Hospital Association, Biltmore Hotel, Atlanta

23-25 American Orthopsychiatric Association, Statler Hilton Hotel, New York City

27-29 AHA Institute, Methods Improvement (Advanced), AHA Headquarters, Chicago

27-29 New England Hospital Assembly, Hotel Statler, Boston

APRIL

3- 6 Ohio Hospital Association, Veterans Memorial Building, Columbus

6- 8 American College of Surgeons, Sectional Meeting, Fort Garry Hotel, Winnipeg, Manitoba, Canada

9-13 International Anesthesia Research Society, Houston, Texas

10-12 American Academy of Pediatrics, Spring Meeting, Sheraton Park Hotel, Washington, D.C.

10-13 Southwestern Surgical Congress, St. Louis, Mo.

10-14 American Society for Experimental Pathology, Atlantic City

10-14 American Physiological Society, Atlantic City

10-14 American Society of Biological Chemists, Atlantic City

10-14 National League for Nursing, Cleveland

11-13 Industrial Medical Association, Biltmore Hotel, Los Angeles

13-14 Carolinas-Virginias Hospital Conference, Roanoke Hotel, Roanoke, Va.

13-15 American Association of Railway Surgeons, Drake Hotel, Chicago

13-20 American Academy of General Practice, Miami Beach, Fla.

19-21 Southeastern Hospital Conference, Municipal Auditorium, Memphis, Tenn.

19-21 Quebec Hospital Association, Queen Elizabeth Hotel, Montreal

21-28 American College of Obstetricians and Gynecologists, The Americana Hotel, Bal Harbour, Miami Beach, Fla.

24-26 International Academy of Pathology, Chicago

23-27 Society of American Bacteriologists, Morrison Hotel, Chicago

24-26 American Association for Thoracic Surgery, Sheraton Hotel, Philadelphia

(Continued on page 16)

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CALENDAR OF MEETINGS

(Continued from page 14)

24-27 Association of Western Hospitals, Civic Auditorium, San Francisco

24-28 National Association for Practical Nurse Education and Service, Statler Hilton Hotel, Detroit

26-27 Iowa Hospital Association, Fort Des Moines Hotel, Des Moines

26-28 Mid-West Hospital Association, Municipal Auditorium, Kansas City, Mo.

26-29 American College Health Association, Detroit

27-29 American Academy of Neurology, Sheraton-Cadillac Hotel, Detroit

29-30 American Psychosomatic Society, Chalfonte-Haddon Hall, Atlantic City

30 American Federation for Clinical Research, Haddon Hall, Atlantic City

MAY

1- 3 Tri-State Hospital Assembly, Palmer House, Chicago

2- 3 Association of American Physicians, Chalfonte-Haddon Hall, Atlantic City

2- 3 American Pediatric Society, Hotel Traymore, Atlantic City

2- 6 American Association on Mental Deficiency, Netherland-Hilton Hotel, Cincinnati

3- 7 Student American Medical Association, Chicago

4- 5 Society for Pediatric Research, Traymore Hotel, Atlantic City

5- 6 Society of Neurological Surgeons, Boston

5- 7 American Society of Internal Medicine, Eden Roc Hotel, Miami Beach, Fla.

5- 8 American Psychoanalytic Association, Palmer House, Chicago

11 Massachusetts Hospital Assembly, Statler Hotel, Boston

7-12 Medical Library Association, Olympic Hotel, Seattle

8-12 American Psychiatric Association, Morrison Hotel, Chicago

8-12 American College of Physicians, Americana Hotel, Miami Beach.

10-12 Upper Midwest Hospital Conference, St. Paul Auditorium, St. Paul, Minn.

11-13 American Radium Society, Broadmoor Hotel, Colorado Springs

14-18 International College of Surgeons, North American Federation, Chicago

14-18 Texas Hospital Association, Memorial Auditorium, Dallas

17-19 Hospital Association of New York State, Atlantic City, N.J.

17-19 New Mexico Hospital Association, Western Skies Hotel, Albuquerque

17-19 Middle Atlantic Hospital Assembly, Convention Hall, Atlantic City

17-19 American Association of Plastic Surgeons, Commodore Hotel, New York City

21-22 American Laryngological Association, Lake Placid Club, Lake Placid, N.Y.

22-24 American Thoracic Society, Netherland-Hilton Hotel, Cincinnati

22-25 American Orthopaedic Association, The Ahwahnee, Yosemite, Calif.

22-25 American Urological Association, Biltmore Hotel, Los Angeles

23-25 American Laryngological, Rhinological and Otological Society, Lake Placid, N. Y.

25-27 American Gastroenterological Society, Drake Hotel, Chicago

26-27 American Otological Society, Inc., Lake Placid Club, Lake Placid, N.Y.

26-27 Tennessee Hospital Association, Riverside Hotel, Gatlinburg

29-31 American Gynecological Society, The Broadmoor, Colorado Springs

JUNE

3-15 International Medical-Surgical Meetings, Turin, Italy

12-15 Catholic Hospital Association, Civic Center Auditorium, Detroit

26-30 American Medical Association, Annual Meeting, New York City

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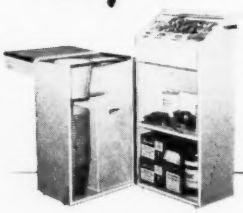

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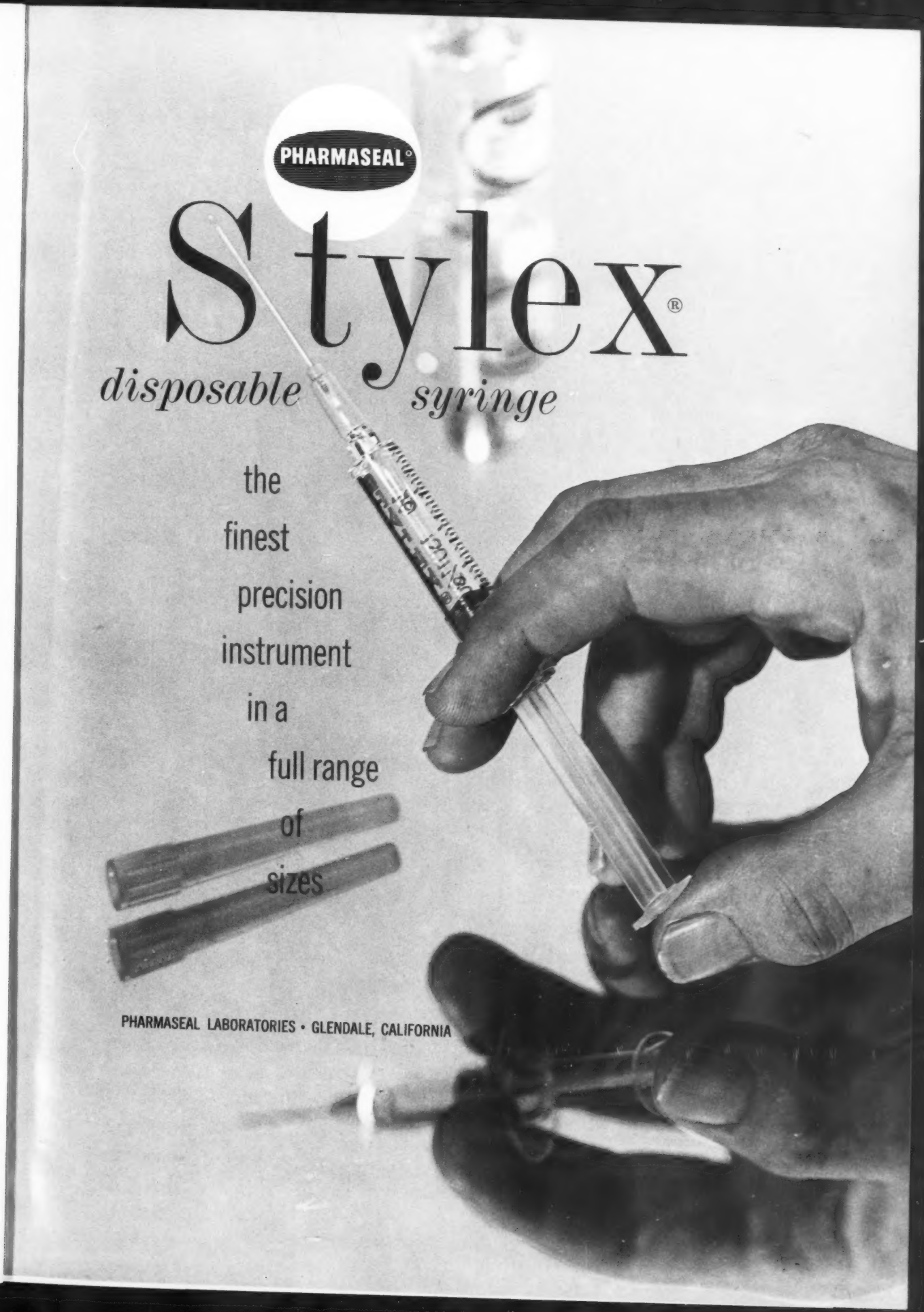
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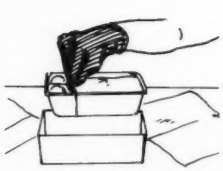
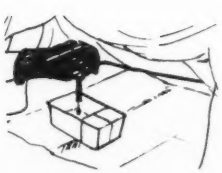




PHARMASEAL LABORATORIES • GLENDALE, CALIFORNIA

Are General Hospitals Responsible for Patients with Chronic Illness?

by Rod M. Bell, FACHA

Condensed from Texas Hospitals, *October 1960*

The title of this article is presented in the form of a question because many people in the hospital field are uncertain of their position in this important question.

Certainly, definitions are many times confusing, and never more so than when a definition of "chronic illness" is attempted. The following listing is generally accepted: cancer, rheumatic fever, arthritis, diabetes, CVA with paralysis (strokes), heart disease, tuberculosis, mental illness, kidney disease, long-time stomach ulcers, and congenital abnormalities of many types.

Public opinion today seems to associate chronic illness with the aged, those usually arbitrarily classified as the over 65. It must be apparent that this nation is faced with a tremendous increase in the number of persons over 65. In 1960, this age group amounted to approximately nine percent of the total population; in 1970, it is estimated it will increase to 12 percent, or a 33 percent increase.

If a major breakthrough is made in the eradication of TB, or in the correction of coronary or artery disease, or in a chemical cure for cancer, the problem of aged care and chronic illness in the aged group will be overwhelming. This simple fact is extremely important, and the shift in emphasis will be on the degenerative diseases which occur with the greatest frequency in the aged group.

Few, if any hospital authorities, will disagree with the statement that "chronic illness in its active stage requires the high quality complex diagnostic and treatment facilities of a general hospital." Moreover, we must continue to educate medical and nursing personnel to better understand and care for these degenerative diseases of the aged.

This type of function is carried out in general hospitals and not special hospitals for the chronically ill and aged. Because of this educational function and the current research centered in acute hospitals, the creation of specialized institutions for chronics will not come about in the foreseeable future.

The hospital's role in education has never been challenged. Nor has its position in sharing research activities of the medical profession. But a never-to-be-forgotten third role of the hospital is simply that of meeting the community needs for bedside care for the ill and injured.

If the chronically ill are classified as sick and needing medical

(Continued on next page)

Mr. Bell is administrator, Presbyterian Hospital of Dallas.

BEGINNING WITH THIS ISSUE . . .

HOSPITAL TOPICS takes pleasure in bringing to our readers the Hospital Digest section. Published as a pocket-size magazine, THE HOSPITAL DIGEST won wide acceptance and leadership among executives in the hospital field. Adding its editorial coverage of ideas from other fields will make HOSPITAL TOPICS of even more value to busy hospital personnel. This addition is in keeping with our aim to be of the best practical month-in, month-out value to our readers.

Gordon W. Marshall

Publisher

and nursing attention, one can pose the question that if those patients are not cared for in a general hospital, where shall this care take place? Where will the research and investigation be conducted in such a fashion that the medical profession can learn the cause and cure of these diseases? Where can the skills and knowledge be concentrated to stabilize a chronic disease or prevent deterioration within a given patient? Most chronic disease hospitals of today are mere storage providing minimal nonaggressive custodial care.

Shall we see a revival of hospitals for the incurables? Shall we see the erection of large buildings known as hospitals for the chronically ill? Or shall we see a tremendous increase in the number of private proprietary nursing homes with their known inadequacies?

Leadership in the hospital and medical fields is concentrated in the general hospitals of this country. The management of the general hospitals and the medical profession is going to have to assume the leadership in a program calling for total patient care and integrated facilities for long-term care with acute care. These should be operated under a common administration.

And it is apparent that another concept must be added in our role of service to humanity: the extension of the general hospital into the care of long-term patients through coordination of skills and knowledge and their application to the new problem.

Good nursing care and sound medical supervision are not as cheap as many have been led to believe. However, in properly designed and constructed buildings, operated under the sheltering arm of the management skills of an acute hospital, adequate care is far less expensive than under any other circumstances. With these new challenges, new ways must be discovered to carry out these functions at a cost the public can afford to pay.

And the answer to my title question, then, remains YES.

Specialists for Hospital Food Service?

by Rita Bedessem

Condensed from Institutions Magazine, *September 1960*

Management service in a hospital dietary department was once considered a revolutionary idea. But with such pressing problems as rising costs, need for improved food service, and lack of trained personnel, the trend toward using the services of outside specialists has been gaining momentum.

Hospital-oriented food-service management has established certain definite policies. The most important of these is to provide the hospital with management that's completely responsible for patient and employee feeding by becoming an integrated part of the entire organization.

Such a service can supply the hospital with complete personnel service including recruitment; menu planning for patients and personnel; handling all professional aspects of food service (including patient visits); teaching programs for patients, student nurses and dietary personnel; and liaison with other departments.

In addition, food-service management may take responsibility for all aspects of food production, training all personnel, developing and using tested recipes. Central purchasing, too, is a function of the food-service firm.

Some basic misconceptions regarding food-service management include the following: that outside food-service management is basically the same as hiring a food-service manager; that a hospital loses accreditation because it lacks a staff dietitian; that dietitians will somehow lose their jobs or their professional prestige; that the quality of food will be cheapened or that food is prepared outside and brought into the hospital to be served.

None of these is true of the hospital-oriented food-service management as it is today.

Not a "catering" service in the sense that most people recognize, the management firm utilizes the personnel, equipment, and serving areas of the hospital. Changes in dietary department layouts, modernization, and remodeling are functions of the food-service firm.

Selective menus are used for the full and modified diets. For unrestricted diets, patients are offered a choice of eight entrees at dinner, six at lunch, 12 appetizers, 12-15 desserts, and up to 15 varieties of fruits and juices at breakfast.

The choices of food are far from ordinary: one menu featured sherry wine and chopped liver canape, rock cornish game hen or lobster tail, and lemon meringue pie or casaba melon.

With all the extra touches, a management service operates efficiently and economically within a hospital. For efficiency, the dietitian and the chef manager work as a team directly with the chief dietitian of the food-service firm. Personnel already employed by the hospital are trained in the firm's procedures and methods.

The chef manager takes over such duties as cooking, food ordering, inventory control, and supervision of production personnel. This relieves the hospital dietitian of a myriad of details.

Miss Bedessem is director, hospital division, Cooper Food Service, Inc.

For economy, and because the average patient stay in hospitals has decreased so sharply, the management service has based its menu upon a two-week cycle.

Control of portions and purchasing can become so accurate that a tour of inspection shows only the smallest inventories on hand, with left-overs present only when planned. Careful control is also the basis for eliminating waste or temptation to pilfer.

Purchasing control primarily emanates from the food-service central office. Meats and canned goods are purchased centrally by competitive bidding from local purveyors. The purveyors, called upon to provide quantities large enough to service 50,000 industrial meals each day and 35,000 hospital meals each month, find it possible to provide top quality foods at lowest large-quantity prices.

While no so-called economy dishes are used, the purchasing policies for expensive foods, plus the use of popular but less expensive items, permits the food-service firm to serve hospitals at the same or less than their previous costs.

As an accurate method of cost checking, the management firm installs complete accounting controls, vouchering and payment of invoices, by trained office staffs. Monthly operating statements are issued which include balance sheets, income statements and supporting exhibits by certified public accountants. The centralized service offers superior control of the product, decreases the number of employees, permits better supervision of personnel, and accomplishes constant, fresh food preparation.

Administration today is looking carefully at department functions to see where economies can be realized. The hospital-oriented food-service firm may be the answer.

THE HAZARDS IN HOSPITALIZATION

by Leon Lewis, M.D., and Rose Laub Coser, Ph.D.

Condensed from Hospital Administration, *Summer 1960*

The confinement of a person to a hospital contrasts sharply with his workaday life in a relatively free environment, which is characterized by economic endeavor in a competitive world in which there is constant give and take between individuals.

Hospitalization carries with it an abrupt change in activity patterns and social relationships. Most of the interplay between the patient and his habitual environment ceases. From a person who communicates with others on a reciprocal level, an individual changes into a "patient" who is talked *to* rather than *with*. Almost all details of his life, including eating, elimination, and living space and position, are subject to the order and control of strangers.

The hospital is the work place of the physician, nurse, and other personnel. They have a job to do, and they try to do it well. But patients do not go through a training period; their reaction to the hospital is influenced by their anxieties and physical distress. Yet their personal concerns have little bearing, it often seems, on the task with which nurses and physicians are entrusted.

To be sure, the routinization of work for the staff is meant to increase efficiency. But human beings present more complex and difficult problems than material goods; they have will power and may bring to the organization cultural and social values which are at variance with those of the staff, thus causing delay and upsetting the smooth functioning of the organization. To overcome this, the hospital has very effective codes of behavior.

The restriction on the mobility of patients, which is therapeutically indicated in many instances, has a secondary advantage for staff—that of assuring accessibility of patients. This immobility is further assured by "the stripping process" in which the patient's symbols of personal identity are removed; his clothes are taken away and so are his jewelry and often even his small change.

Further, the patient is often provided with a type of bedclothes to which he is ill accustomed and which hardly enhance his self-image. Regardless of his physical ability, he has to give up his upright position, symbol of his strength and humanness. His sense of privacy is violated.

These initial procedures impress the patient with the difference between him and those who are well. This segregation is further emphasized by isolation within hospital walls 24 hours a day, while the outside world fades from view physically and socially.

But even more important is the concomitant social isolation between the inside and outside cultures. Relatives drifting in at scheduled hours become more or less strangers, for they are little related to the main problem of the patient—his return to health. Family and friends belong to past and future; they count but little while the patient is hospitalized.

It is not long before the poten-

(*Continued on next page*)

Dr. Lewis is director, Respiratory and Rehabilitation Center, Fairmont Hospital, San Leandro, Calif. Dr. Coser is associate sociologist, McLean Hospital, Massachusetts General Hospital, Belmont.

tial benefits of family interest and the recreational value of visitors start to decline. This element of social isolation is most characteristic of long-term hospitalization. Eventually, a large proportion of patients, especially among the elderly, lose contact with people outside.

Once patients have gone through the hospitalization process, many are not ready to assume the obligations or even the privileges of personal freedom and ordinary life.

In a study of this, 51 departing patients were asked, "Now, what will be the first thing you're going to do when you get home?" The answers were grouped into two broad classifications: the active responses (showing a desire for interaction or for a task of some kind) and the inactive (concerned only with passive enjoyments). In all, 18 anticipated some social interaction, while 29 looked forward only to passive gratification.

The patients were then asked what they had missed most while in the hospital. Those with expectations of inactivity most often missed nothing at all, or only things pertaining to bodily gratification. In contrast, those ready to assume some of the obligations of social life most often said they missed some activity, or associates, or relatives.

It can be shown that patients subjected to greater restrictions are more likely to develop passive patterns than those less restricted. In a general hospital, the effects of varying degrees of patient restriction can be compared simply by studying the differences in behavior in the surgical and medical wards. Recent innovations in post-surgical therapy stressing the physical benefits of early activity have had an unexpected result of a marked increase in the self-reliance of the patients.

It is interesting to note that in their responses to the question of activity when released from the hospital, the difference between surgical and medical patients increases with age. Older medical patients are the most passive group of all. Among them, only one out of 13 is willing to envisage some definite activity.

Thus, the older the patient, the greater the danger that he may accept the passivity that is encouraged in the hospital, a tendency all the more regrettable in view of the failing of our contemporary American culture to provide him with an active role.

It is but a small step, it would seem, between the acceptance of hospital life and the initiation of a vicious circle in which psychological dependence gives rise to somatic disorders that reinforce the need for hospitalization. The hospital staff bemoans the "hospitalitis" of the aged, but hospital procedure itself helps create it, while, on the outside, our society does little to help break the pattern.

The passivity that is urged upon the sick is already the lot of the elderly, who are expected or compelled to give up lifelong occupations and projects upon which their self-image has been built.

In fact, a cultural definition is shared by the sick and the aged: both are considered socially useless. Old people have now achieved the status of a major social problem group, like the mentally disturbed or the delinquent.

Obsolete and burdensome, the poor and old people may have no place to go except the wards of chronic-disease hospitals, where they are often unable to communicate with one another or with the staff and where they are restricted in their movements and denied the stimulation necessary for anything beyond the lowest level of existence. They sit in chairs and stare, their hands, once capable of skills, folded in their laps.

Within the hospital walls they are living up to the cultural definition of the sick. They have given up their efforts at self-determination. It is obvious they could often be rescued by the hospital and by society but that, without any possible framework within which to function, there is no alternative for them but chronic illness and almost total passivity until death.

At present the median age of patients in many public hospitals is 65 to 75 years. Since these hospitals have been geared to custodial care, the type of service provided for the elderly tends to be at a uniformly low level.

In a good analysis of the New York municipal hospital system the reasons for prolonged hospitalization were assessed and a distinction was made between medical and psychosocial needs. In the sample studied, 19.2 percent of patients of all ages were found to be confined to hospital without any apparent indication. Their essential treatment had been completed, and there was no need for medical services.

Most of the adult patients "not requiring hospital care" were found in the chronic-disease hospitals, where they constituted over half of the patients. A considerable number were also found in the acute general hospitals, where they averaged one-sixth of the patients.

This percentage of potential candidates for rehabilitation represents the robust survivors of hospitalization together with the newcomers who have not deteriorated beyond restoration. The only way to prevent the accumulation of an undue number of hopeless custodial patients is to offer preventive care in all illnesses and restorative care to all convalescents as the situation demands.

The deteriorating influence of long confinement in institutions is not entirely dependent upon the age of the persons, although there is a quantitative difference between the effects upon the aged as compared to the young and middle-aged. The hazards of inactivity, disinterest, and enforced rest are the same in nature for all groups, including the disabled.

In a pilot project of disabled patients, virtually all the candidates for rehabilitative care were found to be very much more disabled by secondary consequences of care than by their original disease or injury. The findings of this study are somewhat obscured by the fact that rehabilitation po-

tential cannot be accurately evaluated after prolonged hospitalization. Nevertheless, there is sufficient evidence from rehabilitation services around the world to indicate that a large proportion of the costly space-occupying, burdensome, frustrating population of public hospitals is attributable in large measure to hidden causes inherent in the character of hospital care.

The seeds of deterioration are often planted in the general hospital during the care of acute illness. Patients who are not so fortunate as to make speedy recoveries may suffer the first ravages of disuse and inactivity before complications are even suspected. With the elderly, a few unnecessary days of bed rest may mean the difference between full recovery and long-term disability.

The most fundamental problem is recognition of physicians and nurses that danger lurks in the very routine procedures which they carry out. Just as the physician should be constantly aware of the need to increase activity and to avoid disuse, so should the nurse be alert to the occasions when a chair may be more appropriate than the bed and when walking or stair-climbing may be more beneficial than sitting. Intellectual acceptance of the notion that disuse is dangerous has too rarely been followed by action to circumvent disuse.

For many patients, the hospital as it is structured today is an inappropriate therapeutic environment. Most of them would benefit from access to recreation rooms, roof gardens, patios – to places where social life and activity are possible.

Physical and occupational therapy should be routine for all ambulatory patients, who should also avail themselves of exercise areas, libraries, dining rooms. Provisions should be made for day patients, thereby minimizing their cultural and social isolation as well as hospital expenses.

Such changes require a broadening of the physician's field of interest, a change in the goals and methods of nursing, and a new conception of the responsibility of hospitals.

Hospitals should be more than a convenient place to carry out technical medical and nursing procedures. Their organization should favor an increase in participation of all those involved in the care of patients. The area of responsibilities should be broadened, and all those who work with a patient should have an understanding of his condition.

Sociological studies in hospitals have shown that people work better if they are permitted to use initiative and participate in decision-making. If the organization is so structured as to foster in all staff members the feeling that they actively participate in therapy because they share responsibility and knowledge, they will be more motivated to use their initiative and will pay less attention to rigid rules and regulations as a defense of status positions.

The situation which now prevails must be recognized and influenced by an informed public. Human beings now incarcerated in hospitals and nursing homes are deprived of exercise and activity in a way which violates the rules imposed upon keepers of dog kennels.

Intensive study and action by government agencies, social service and medical organizations is urgently required. The complex problem of the aged, the chronically ill, and the disabled represents a major challenge to a culture which prides itself on its roots in the firm soil of democracy and the dignity of man.

Mental Hospitals Open Their Doors

Reports from Two Countries: Britain and Sweden

In Britain: *Condensed from* Mental Hospitals, *April 1960.*

by C. P. Seager, M.B., B.Ch., D.P.M.

British psychiatrists have been congratulating themselves on the effectiveness of a new approach to chronic psychiatric illness: the open door policy – a policy largely brought about by the physicians themselves.

Opening the doors of a hospital is not simply a question of somebody going around one morning and flinging them all open. The essential is a change of outlook in the staff; the aim is to discourage institutionalization and prevent the continued accumulation of large groups of patients.

The patients too have to be prepared. The closed doors of the ward have represented security and protection for them and their opening may be taken as an attack on this state of safety. Patients must be shown that it is not always necessary to gain a sense of security by giving up liberty and freedom of action.

Even with advance planning it is usually not feasible to open all

(Continued on next page)

Dr. Seager is a Fulbright grantee in the U.S. (at department of psychiatry, State University of Iowa, Iowa City) on leave of absence from the Bristol Mental Hospital, England, where he is an assistant psychiatrist.

the doors of a hospital at one time. The usual practice is to open doors gradually, starting with the best behaved patients. Tranquilizing drugs have helped in smoothing the path to the open door.

A very important part of the open-door policy is emphasis on individuality, with efforts made to give the patient more independence and develop him as a person.

It is also necessary to occupy him in a meaningful manner. "Industrial therapy" – in which the patients carry out light assembly work from a nearby factory on contract – is an active approach to this. The aim is not merely to occupy the patient nor even to provide him with extra money, but to rehabilitate him and get him out of the hospital and into the industrial world.

A step forward, or perhaps sideways, is the establishment of the day-hospital for psychotic patients. While the main purpose of this is a continuation of the rehabilitation program by industrial therapy, it also serves to provide a sheltered environment for those patients.

The open door, occupational therapy, and individualization of the patient are all part of a larger concept: that of the therapeutic community. The primary defect that brings a person to a mental hospital is desocialization. It is the degree to which societal contacts have broken down, rather than the patient's overt symptoms, which determines whether he remains in the hospital.

The function of the mental hospital, then, should be to modify this condition, partly by suppressing the symptoms of the psychosis, partly by rearranging the patient's external environment, but mostly by changing his method of social interaction by giving him a period of training in a special community where he can learn new ways of reacting.

Certain principles are emphasized: the patient's individuality is preserved; he must be trusted as far as possible; he should have as much responsibility for his own life as is reasonable, and he should be active. The idea is that he responds to the atmosphere around him and all those in contact with him have an effect on his behavior.

Hospitals are opening their doors "inward" too. While patients are entering the community and the public is becoming more aware that these are people as well as patients, hospitals are also inviting the community in, as visitors.

Because of the change in attitude this has helped to engender, there is a new mental health act in parliament, which encourages the admission of patients to the hospital without formality. Even the minimum legal restrictions previously imposed in "voluntary" admissions will be removed.

The act also removes the stigma of committal by a magistrate. The responsibility will now lie with the doctors, who must decide whether a patient is sufficiently ill to require restraint for his own good.

It only remains to warn that the tolerance of society must not be pressed too hard. A person is sent to a mental hospital only when he can no longer be tolerated by those outside; he can be discharged again when behavior returns within the tolerable limits.

The success of the open door policy, then, depends on public tolerance, which it is the duty of the medical profession to foster.

In Sweden: *Condensed from* Det Moderna Sjukhuset, *Vol. 2, No. 1, 1959*

In order to be admitted to a mental hospital, the law requires that a patient be declared mentally ill.

This statement is not as elementary as it sounds. Psychiatrists disagree on what constitutes the outside bounds of mental illness. A person can have all the symptoms of a considerable disturbance one day, then be entirely free of them the next. Even relatively serious acute symptoms may disappear in the space of a few hours.

It is extremely difficult for the physician in the general hospital to come to a sure decision that a particular patient is mentally ill and requires the care provided by a mental hospital.

Yet the physician must make a twofold decision: he must decide whether the patient's symptoms and tests confirm a legal classification of mental illness; and he must also decide where the patient will receive the most suitable care, in the general or the mental hospital.

Here the physician has another difficult decision. If he decides not to have the patient committed, that patient may prove violent. On the other hand, the physician may have the patient committed, and then find that subsequent tests at the mental hospital rule out the possibility of legal mental illness. Either way, the physician is subject to criticism.

Being admitted to the mental hospital is not the same as being committed. Commitment implies the retention of the patient until physicians pronounce him cured and able to return to the community. Admittance implies the voluntary entry by the patient into the mental hospital.

The psychiatrists' view is that many persons not legally declared mentally ill would seek care at the mental hospital – if they could depend on being allowed to leave whenever they themselves wished.

So much furor has been raised by the question of free entry and exit that a measure has been placed before parliament proposing that the laws governing mental hospitals be altered so a person can seek admittance to a mental hospital *without the condition that he be required to stay until formally released.* The only restrictions are that the patient himself must ask to be admitted, and that his illness be of such a nature that the hospital can help him.

The right of retention, however, may be exercised in cases where the patient is potentially

or actually violent, where he maintains an animosity toward the treatment and the therapist, and when he is ill in such a way that he cannot comprehend what is happening around him.

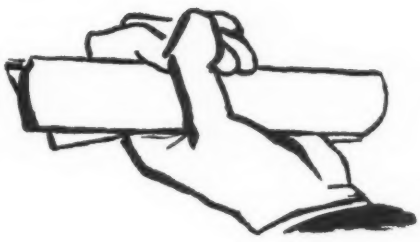
In addition, when a patient is judged dangerous to himself and others, he may be committed by law under the new proposals.

It has been suggested that this right of retention be extended to encompass other forms of mental illness. However, proponents of the bill claim this would dull the edge of the bill and render the retention-free admission as illusion. For the new treatment regimen to be accepted by the public the retention-free clause must be kept as broad as possible.

Even though the voluntary patient should have the most possible freedom while in the hospital, he must of practical necessity find certain restrictions, e.g., doors to a particular section locked. In other respects, however, restrictions are virtually nonexistent. If the voluntary patient chooses to leave the hospital, he may do so even against the wishes of his doctor. If he subsequently changes his mind, he may be readmitted. His request to leave *must* be honored, even though the doctor knows that he may return as a committed patient.

This point hospital administrators have criticized on the grounds that when a patient takes the advice of his doctor and remains in the hospital, the public puts him in the same category as the patient who is retained; while the one who exercises his right to leave is thought of as cured, even though he has not been formally released by the medical staff.

The new regulations are still provisionary, pending the outcome of a revision of mental health laws.



HOARDING AUTHORITY AND RESPONSIBILITY

by Don H. Scott

Condensed from Sales Management, *May 6, 1960*

In today's business, a *doer* is worth peanuts; a *developer* has unlimited value. The man who can distribute a great work load over many employees is on his way.

Unfortunately, we all have some "do-it-myself-because-my-people-aren't-competent-and-it's easier" in us. In fact, a great number of managers are this way.

Two things contribute to this attitude: lack of knowledge and lack of courage. When managers are asked to analyze why other managers don't push responsibility down the line, the reasons often include:

Fear that employees will not do the job well enough or that their lack of know-how will reflect on the manager; belief that it is quicker to do than to teach; a feeling that employees don't do enough planning; a belief that the manager would be shirking his own responsibility, or that he should know everything going on in his section; fear that someone else will learn enough to threaten the manager's job, or that the employees already have too much to do; a belief that the employees are not capable enough to learn.

Mr. Scott is with Don Scott Associates.

Then, when these managers are asked to list the advantages of passing down responsibility, this list results:

Frees the manager for creative work of planning and development; develops personnel; cuts costs because managerial time is more expensive to purchase; promotes higher morale – happier employees; sharpens decision-making because employees are nearer to the actual work being done and have quicker access to the facts; saves time because communication up and down the line is not necessary.

The only logical conclusion is this: *decision-making should be pushed to the lowest level of the organization at which facts are available to make the decision.*

This puts responsibility on the manager, since "facts" must be not only in the form of data, but also in the form of know-how. The manager should know that to do a good job the employee must have two things: a thorough understanding of the job to be performed and the will to do it to the best of his ability.

The manager today has enough work just in guiding his enterprise through a maze of legalities without bogging himself down in details which someone else could do. Today's manager's biggest job is to contribute to constant improvement of personnel.

Fortunately, he can accomplish two things in one step: the mere act of pushing decision-making down is a development process, if done right.

(Continued on next page)

Lost Sponge Found, to Hospital's Sorrow

What is a lost sponge worth? According to *The Regan Report,* it cost one hospital $35,300 when a Los Angeles superior court judge awarded damages of that amount to a patient who had required two trips to surgery to remove a sponge negligently left in his abdomen following an appendectomy.

That word "decision" seems to frighten a lot of managers. They picture personnel running off with the company. They seem to believe that chaos will result when this "decision-making" gets out of the manager's hands. The trick is that it never really does get out of your hands.

All authority flows from the man at the very top. His responsibility is the sum total of everyone's responsibility in the organization. He can never free himself from it. He can, and should, delegate work to those below him, in the form of assigned responsibilities. He is, in effect, merely breaking off chunks of his own responsibility and handing it to someone else.

But the manager, in turn, must also hand down commensurate authority. It is within this chunk of responsibility that the employee must be allowed to make decisions. And then he should be allowed to break off pieces and hand them down the line. The manager should make sure that the responsibility also carries authority in commensurate measure.

Most managers find that delegating jobs gets them done more efficiently than they could have done them themselves. For one thing, the employee down the line has more time. For another, he takes the job more seriously, since it is a bigger job to him and often represents opportunity—as it should.

Most trouble in the area of delegation stems from the manager's inability to understand himself. To develop your own managerial ability, work at seeing yourself as others see you. Make an honest attempt to blame yourself for any unfortunate occurrences in your division. Look back and see if you couldn't have forestalled the incident with better training of personnel.

All this is hard on the ego, but wonderful for making better managers. After all, taking the blame is one reason for your salary's being higher than that of those who work for you.

New Horizons

by Austin Smith, M.D.

excerpted from New York Medicine, *October 20, 1960*

It is, let us say, the year 2000 A.D. Words that strike fear like cancer, polio, heart attack, have become as unexciting as diphtheria, typhoid fever and smallpox were in the language of 1960.

The common cold has been practically eradicated. There are pharmaceutical remedies for all of these; more important, there are also preventive remedies.

You can be fitted with a substitute heart or lung.

As you sleep, work, or play, a tiny instrument taped to your chest transmits vital body data to your family physician's computing center. If indicated, a return impulse triggers release of a measured prescription dose into your blood stream to avert a "silent stroke" or a "concealed coronary."

There is a pill which enables many to condense a full week's sleep into 48 consecutive hours so that if necessary they can be awake and active continuously for most of the remaining week.

Hypnosis has become fully integrated into medical practice with pharmaceuticals designed specifically as adjuncts.

The sex of a yet unborn child can be determined in the second month of pregnancy. Morever, there is mounting evidence of how to improve the human species through controlled mutation of genes.

Undreamed-of remedies are coming from the sea and, oddly enough, from large-scale screening and analysis of the herbs and barks and waters used by the dwindling number of African witch doctors.

Partly because of drugs, severe physical pain can be eliminated.

Electronic computers continuously record the everchanging characteristics of virus strains. They transmit electro-magnetic impulses that correspondingly alter the structure of anti-viral medicines stored in pharmacies, drug warehouses, and home medicine closets across the country.

Application of research into cellular nucleic acids—the so-called "mother molecules" of life—has created an entirely new field of medicine, preventive genetics, to forestall certain birth abnormalities.

And How Are Your Communications?

A recent article in *Executive Review* dealing with the problem of executive communications stresses the difficulty of truly accurate transmission of executive thinking down the line. Suggestions, the article says, are misinterpreted as orders. Orders are colored by the personalities of the individual involved.

The article quotes a plant foreman who summed up the problem as follows: "You know how it is," he said, "the president asks what time it is, and by the time it gets down to us, we're told we have to start making clocks."

House Approves Special Programs for Non-Certified Foreign Med School Grads

The offering by hospitals of special, temporary educational programs for non-certified graduates of foreign medical schools was approved by the House of Delegates of the American Medical Association at the organization's 14th clinical meeting in Washington, D. C., November 28-December 1, 1960.

Hospitals wanting to conduct such programs were asked to submit proposals for their programs by December 31 to the AMA's Council on Medical Education and Hospitals.

Guides for such programs, which will run from January 1 to June 30, 1961, have been sent to all hospitals with approved intern and residency programs. They include:

- Foreign medical graduates must be accepted by January 4 for the April 4, 1961, examination to be given by the Educational Council for Foreign Medical Graduates.
- Financial arrangements are to be made by hospitals and foreign medical graduates.
- Non-certified foreign graduates must be divorced from any responsibility for patient care.
- Programs should be designed to further medical knowledge for the non-certified foreign graduate and assist him in passing the next ECFMG test.

The House, at the Washington meeting, reaffirmed its policy that "all graduates of foreign medical schools serving as interns or residents in U. S. hospitals as of December 31, 1960, will have been certified by the Educational Council for Foreign Medical Graduates."

If the foreign physicians enrolled in these special programs pass the April ECFMG test they immediately revert to the intern and residency programs in which they were enrolled, according to Walter Wiggins, M.D., secretary, Council on Medical Education and Hospitals. If they fail the test, their visas will be revoked on June 30.

Nearly 2,500 foreign physicians have failed to pass the qualifying examinations. These doctors faced deportation January 1. However, if they are enrolled in one of the special educational programs, their educational exchange visas will be extended.

The special program was worked out by the AMA with the State Department, the American Hospital Association, and the Association of American Medical Colleges.

Other actions of the delegates at the Washington meetitng included:

- Reaffirmation of the AMA's support of the Kerr-Mills bill, and of its opposition to any legislation involving the use of the OASDI mechanism for medical aid to the aged.
- Recommendation that the medical profession encourage the widest possible use of the Salk vaccine for the prevention of polio.
- Approval of a resolution calling on the AMA board of trustees and the council on medical service to assume leadership in further promoting the development of voluntary, nonprofit health insurance, and in coordinating the effort of private insurance carriers

(*Continued on next page*)

Winner of the Thomas G. Hull Award for the best exhibit on original research in the scientific exhibits is "Chemotherapy of Cancer," presented by Herman A. Freckman, M.D., Harry L. Fry, M.D., Elmer R. Maurer, M.D., and F. L. Mendez, Jr., M.D., all of Cincinnati.

and cooperating with representatives of other types of medical-care plans.

Abstracts of selected papers from the meeting follow.

Polio Immunization

Significant Proportions of Population Inadequately Protected by Vaccine

In 1960, although the annual total of poliomyelitis cases will be lower than in any recent year (estimated total: 3,600), and paralytic cases will be closely comparable to the low of 1957, the disease continues to occur in a repetitive pattern.

Occurrence is predominantly in pre-school children in lower socioeconomic groups, in crowded urban areas and selected rural localizations. The pattern in all cases reflects the distribution of the residual unimmunized population.

A lineup of notables at the House of Delegates' dinner included: (l. to r.) Dr. Dwight L. Wilbur, AMA delegate, San Francisco; Maj. General Howard McC. Snyder, personal physician to President Eisenhower; Leonard D. Heaton, surgeon general of the Army; and Dr. E. Vincent Askey, AMA president.

Surveys of immunization status continue to reveal significant proportions of the population inadequately protected. Between September 1959 and September 1960, the percentage of the 5-9 age-group with four or more doses increased from 32 to 50 percent, and of the 10-14 age group from 28 to 47 percent, but the level in the pre-school child (ages 1 to 4) was increased only from 22 to 35 percent.

More important is the fact that approximately one-half of school-age children (5 to 15) have not received four inoculations, and approximately two-thirds of children 1-4 are similarly inadequately protected. This latter age group accounts for the greatest proportion of polio cases in recent years.

Thus, the survey results reveal that we have had little success in the past year in further reducing the number of completely unvaccinated persons. The majority of vaccine distributed has been used in further inoculation of those already partially immunized.

In our experience with the Salk vaccine during local epidemics, we have found its efficacy to be greater than 80 percent for three or more doses, and significantly greater for four or more doses. — *E. Russell Alexander, M.D.*, chief, surveillance section, Communicable Disease Center, Atlanta, Ga.

Laboratory, Field Studies Establish Validity of Principle of Live Vaccine

Results of laboratory and field studies to date have now established the validity of live poliovirus vaccine as a principle.

The Public Health Service Committee on Live Poliovirus Vaccine, in its report released on August 24, recommended the use of the Sabin Type 1, 2, and 3 strains but noted that the Type 3 strain had some unfavorable features and that a search for a superior Type 3 strain should be continued.

The committee also expressed the view that the use of live vaccine was more appropriate on a community basis than on an individual basis.

The report of the World Health Organization Expert Committee on Poliomyelitis indicates that approximately 50 million persons have received Sabin strains of live vaccine, 6 to 7 million Koprowski strains, and approximately 2 million the Lederle strains. Recent information indicates that as of November 1 a total of 236 million doses prepared from Sabin strains have been given to some 74 million persons in the U.S.S.R., with reported success even though the testing manufacturing requirements are less rigid than those proposed for vaccine to be manufactured in the United States. — *Roderick Murray, M.D.*, director, Division of Biologics Standards, National Institutes of Health, Bethesda, Md.

Careful Planning, Organization Needed For Effective Use of Live Vaccine

Oral vaccines have several obvious advantages over the inactivated vaccine. They can be given by mouth in a sweet syrup or candy form, thus obviating the unpleasant and awkward hypodermic syringe. They can bring substantial alimentary-tract immunity as well as circulating antibodies, and thus should prevent natural reinfection and spread; and the vaccine viruses may spread to siblings, parents, and others in close association with the vaccinated person, thus conferring additional immunity within the group.

However, oral vaccines have the same basic limitations of the Salk-type vaccine — namely, the need for repeated doses. According to Dr. Sabin's recommendations, supported by many others, the oral vaccine must be fed as a monovalent antigen at intervals of at least six weeks. It also seems best to start at about three months of age. Moreover, it may be desirable to feed a final dose of triple vaccine at about one year of age, or about six months after the three monovalent feedings.

Four general methods have been proposed for use of the oral vaccine:

(1) *Community-wide immunization.* Such programs

Photo courtesy Chase Ltd., Washington, D.C.

Medical illustrator Joseph Sumner of Philadelphia outlines emergency treatment technics while Dr. and Mrs. Ernest H. Buch, Kankakee, Ill., peer earnestly at mannikin showing a type of thoracic injury.

would be of value only when it would be possible to assure essentially complete response for three properly spaced doses from the population age group designated in the program. Furthermore, I believe no such program should be contemplated until an adequate plan to insure the complete immunization of all newborn infants within their first year of life has been organized on a continuing basis.

(2) *Selected area immunization.* This would seem to have many applications in this country. It should be possible by simple advance planning, including prior sample surveys and analysis of past poliomyelitis incidence, to delineate the areas needing special attention. Each immunization campaign could be adapted to the particular interests and special cultural pattern of the selected area.

(3) *Infant immunization.* This should be recognized as the primary necessity of any program for the eradication or even for the effective control of poliomyelitis. With the peak incidence of paralytic polio now falling within the 1-2 year age group, it is obvious that the immunization program must reach a high proportion of infants.

(4) *Epidemic control.* This also may become one of the valuable uses of the oral vaccines, because they have certain characteristics uniquely applicable to such use – ease of administration, rapidity of the antibody response after feeding, and a potentially ready acceptance by the public.

No one who has not yet been immunized should wait for the oral vaccine. Salk-type vaccines are of proved potency and should be used extensively. After the oral vaccines become available, I believe there will still be a sound basis for the use of the Salk-type vaccines. The two types of vaccine will be in fair competition.

Availability of the oral vaccine in itself will not result in the eradication of poliomyelitis. Careful planning and sound community organization will be necessary to achieve the goal of eradication that Dr. Sabin has called for. This will call for a more comprehensive effort than has yet been applied to the use of the Salk-type vaccine during the last five and one-half years. – *A. D. Langmuir, M.D.,* chief, epidemiology branch, Communicable Disease Center, Atlanta, Ga.

Report on Toxic Reactions in Children Caused by Phenothiazine Derivatives

The phenothiazine derivatives are frequently employed in pediatric practice, especially for the control of nausea and vomiting. They are also widely used in the home by the adult population as tranquilizers. Not infrequently toxic reactions to these agents have been reported in children, both from therapeutic administration and from accidentaly poisoning.

The most dramatic toxic effect observed during prochlorperazine therapy has been that of the extrapyramidal seizure syndrome. These extrapyramidal seizures have often been variously misdiagnosed as bulbar poliomyelitis, meningitis, encephalitis, tetanus, brain tumor, or epilepsy. They are characterized by episodes of marked drowsiness and lethargy, but usually there is not loss of consciousness.

The phenothiazines are not anticonvulsants and may aggravate an underlying convulsive disorder. Caution should be exercised in administering these drugs to seizure-susceptible individuals.

A physician who employs these agents for the treatment of vomiting in children should exercise considerable care in the establishment of the primary diagnosis, because these drugs may temporarily mask a serious underlying disease such as meningitis or an acute "surgical abdomen." He should also be thoroughly familiar with the clinical manifestations of drug intoxication or idiosyncrasy, and the parents should be instructed to observe the child closely for side reactions. – *Roselyn Payne Epps, M.D.,* and *Roland B. Scott, M.D.,* from the department of pediatrics, Howard University College of Medicine, and the pediatric service, Freedmen's Hospital, Washington, D. C.

(*Continued on next page*)

Two GP's of the Year. James T. Cook, M.D. (r.), Marianna, Fla., is congratulated on being named the 1960 GP of the Year, by J. M. Travis, M.D., Jacksonville, Tex., the 1952 winner.

Good Fit, Medical Supervision Needed For Safe Use of Contact Lenses

There are now estimated to be over six million people wearing or attempting to wear contact lenses. In this group we have a new source of potential corneal disease, since very few of them are under medical supervision and many of the non-medical personnel attempting to fit lenses have no sound background in corneal physiology and pathology.

However, the lenses are safe when the wearer is rigidly selected, when they fit properly, and when patients have repeated medical examinations to insure the healthy function of the cornea.

Contact lenses are indicated in several unusual eye problems, such as a high degree of astigmatism, nearsightedness, or farsightedness, but medical indications account for only a few of the contact lenses being worn. The vast majority are worn solely because of a desire to get rid of glasses.

Too many people are attempting to wear contact lenses. I am convinced that many of these expensive fads are winding up in a dresser drawer after poorly advised patients find that contact lenses are just too much trouble. Prospective wearers should be advised of the unpleasant adaptive phase of being fitted to determine whether they have a strong enough desire to persevere through this phase.

During adaptation there is a slow increase in tolerance to the lenses with periods of tearing, red eyes, blinking, inability to open the eyes widely, and peculiar visual symptoms caused by the excessive tearing. The patient must realize in advance that he will have to put aside time each day for this adaptation, since in the early stages these symptoms may prevent any productive activity.

Age also is a factor in selecting patients. Persons in their late 30's or 40's probably will not accept contact lenses very readily because they usually have had many years of good service from glasses. They also are approaching the time when bifocals may be needed. Since contact lenses can only correct distance vision, these patients would still require glasses for reading. Bifocal lenses are being made, but they are not yet perfected. — *John W. McTigue, M.D.,* Washington, D.C.

Calls for Revision of Archaic Laws Which Impede Donation of Eyes

Most of our state laws are backward and are not geared to the donation of eyes. In the District of Columbia it is actually illegal to transport an eye from one place to another. It is high time for congress to revise the archaic D.C. law.

The eyes of the donor must be removed within six to eight hours after death, and the cornea must be transplanted within 72 hours after the donor's death, preferably within 12 to 24 hours.

However, most states require the written permission of the next-of-kin before the eyes of the deceased can be removed, and this sometimes cannot be accomplished in time to make use of the eyes. Other eyes are lost because the fact that a person has willed his eyes legally is not known for several days after death when his will is probated.

Recently, the state of New York passed a law making a deceased's pledge before death legal permission for removal of his eyes without obtaining permission from the next-of-kin.

The main obstacle in the grafting of corneas is the lack of donor eyes. Eye banks urgently need the help of physicians in encouraging the donation of eyes. These corneas will return many sightless persons to useful places in our society.

Recent research developments have proved that corneas can be stored for indefinite periods of time and used successfully for partial-thickness cornea grafts. At the same time, the shortage of human corneas has stimulated a reinvestigation of the possibility of the use of animal corneas in human beings. Some success has been obtained with partial-thickness grafts utilizing preserved animal corneas, but there is no doubt at this time that human corneas are preferable to animal corneas. — *J. Harry King, M.D.,* Georgetown University School of Medicine, Washington, D.C.

Physicians Need to Be Alert For Alcoholics Among Their Patients

Physicians should be on the lookout for alcoholics among their patients because the vast majority are under medical care for other reasons.

To the public, the image of the alcoholic is all too often the individual who has reached the skid-row derelict type of drinker. Statistically, however, this type constitutes only three percent of the alcoholic population.

The vast majority of alcoholics are patients whom the physician has been treating for other conditions, and in whom he may have suspected excessive drinking, but with whom he has never discussed the problem. To detect these cases early and save the patient from further grief and illness is his obligation.

A physician's suspicions should be aroused when a patient begins to use alcohol not as a beverage, but as a drug to produce definite effects.

A patient with a history of excessive drinking over a period of time which has caused an adverse reaction to the patient or his family or his environment can be considered to have the problem of alcoholism. If there is a consistent adverse effect with drinking, the patient should be cautioned, as he would be with any other illness which is suspected when early unconfirmed signs are noted.

Besides early detection, perhaps the greatest contribution the personal physician can make is to listen to the patient ventilate his problems.

Many people have no one to whom they can talk, or who will take the time to understand their discomforts and miseries. It is here that the personal physician can play his greatest role. He must help the patient to gain insight into his problems, help him to recognize where these and his conflicts lie. Full discussion with members of the patient's family is important so that they will cooperate and under-

stand that the patient is not a weak or willful individual, but one who is ill and needs help.—*Marvin A. Block, M.D.,* assistant clinical professor of medicine, University of Buffalo School of Medicine, Buffalo, N.Y.

Effective Treatment for Amebiasis Achieved; U. S. Incidence Reduced

Successful treatment of amebiasis is uniformly achieved with our present modes of management, supplemented by antibiotic therapy. One of the newer experimental drugs, entamide furoate, has proved very effective in treating the disease, particularly in the so-called asymptomatic or carrier states, we have found. We have had consistent results in the carrier patients, and in a three-month follow-up have had a 90 percent therapeutic efficiency. The drug is as effective as most of the available agents, being potent, specific, and free of any appreciable side-effects.

The prevalence of the disease has been reduced by public health preventive measures and therapeutic measures. Though there are no statistics currently available on the exact number of persons stricken with amebiasis, we estimate an incidence of four percent for the United States as a whole. This national average requires adjustment for various specific localities. In the southern coastal states, the incidence is 7.5 percent; in the states bordering Mexico, it is 5.8 percent.

The Public Health Service should exact control of migratory populations, food handlers, sewage disposal, and sanitary measures in order to eliminate insect carriers. In institutions or heavily infected areas, chemotherapeutic measures should be exercised to eliminate this diseae. An educational program to emphasize the importance of personal hygiene and good sanitation should be incorporated in the program of control, so that major periodic epidemics, which still occur, may be prevented.—*Gordon McHardy, M.D.,* New Orleans.

Calls for More Study of Maternal Viral Infections; Cites Rubella Effects

We know far too little about effects resulting from maternal viral infections. It is even conceivable that a majority of obstetrical accidents and nongenetic congenital defects could be explained on this basis.

Organized study can permit expansion of our knowledge. Meanwhile we should make full use of the effective measures for prevention of certain viral infections in the pregnant woman and our rapidly increasing ability to diagnose and treat congenital anomalies.

Unfortunately, rubella virus cannot be isolated, and there is, therefore, no rubella vaccine. However, rubella frequently can be prevented in an exposed individual by the administration either of pooled gamma globulin or hyperimmune globulin within six days of exposure.

Newer surgical methods offer considerable hope for some of the more common congenital defects resulting from rubella, such as patent ductus arteriosus and cardiac septal defects. Cataracts detected early can be alleviated. More and more is being learned about the effective management of perceptive hearing defects in children.

An exhibit containing a functioning model of the cardiovascular system, "The Circulation during Hypotension (Shock), drew the attention of Jack Barbour, M.D. (kneeling), Los Angeles, and J. E. Flynn, M.D., Everett, Wash., as exhibitor Sol Bernstein, M.D., controls the system's operations.

Findings in a study recently published by the British Health Service indicated that if rubella occurred in the first 12 weeks of pregnancy the likelihood that the infant would be born alive and be alive at age 2 without malformations was 73 percent as contrasted to 91 percent in the controls. If an infant of a mother with rubella in early pregnancy was born alive, his likelihood of being alive and showing no malformation at age 2 was 80 percent as contrasted with 96 percent for the controls.

Of the more than 1,500 women who experienced some virus infection during the first 12 weeks of pregnancy, 578 experienced rubella. These women had approximately twice the number of natural abortions and stillbirths. In their infants there were about 2½ times the number of deaths under age 2. The incidence of major malformations in children living at age 2 was approximately eight times greater than in the control patients.—*Robert H. Parrott, M.D.,* Washington, D. C.

Attitude of Healthy Persons Affects Reaction of Chronically Ill to Disability

Seventy-five years ago, chronic illness caused only one-fifteenth of all deaths; now, more than one-half of all deaths are due to diseases which have already produced chronic illness or disability.

This large number of handicapped people has a tremendous impact on the whole socio-economic fabric of our country, since an estimated 80 percent of the chronically ill are not hospitalized.

(*Continued on page* 80)

Consolidated Planning, Community Services Occupy PH Experts

The following are taken from papers given at the meeting of the American Public Health Association, held in San Francisco October 31-November 4.

Hospital-Centered Program Under Way in New Jersey

Under the impact of rapid scientific and technological changes, we in public health must re-evaluate our activities, our patterns of organization, and our standards of performance to meet these changes.

It has always been obvious that the local health department, the community hospital, private practitioners of medicine, and a host of ancillary agencies, official, voluntary and private, have important roles in protecting, preserving, and improving the health of the community and each of its citizens. We now realize that these agencies, operating independently and for the most part isolated from each other, do not offer the continuity of care necessary for effective control of chronic illness.

The average citizen is beginning to conceive of the hospital as the health center. Certainly more persons seek the services of the clinical laboratory, x-ray department, cancer diagnostic clinic, cardiac evaluation center, and alcoholism clinic — all usually integral components of the modern hospital — than come to the venereal disease, tuberculosis, and children's orthopedic clinics, the hallmarks of the health department.

Admittedly, we have a long way to go before the health departments can respond to all needs. Nonetheless, now is the time to undertake some well-conceived demonstrations wherein community health services are organized on an integrated basis, with a broad public-health approach to the total health needs of the citizens of the community.

Over the past several years, citizen and professional groups have explored the problem of devising a more orderly and comprehensive pattern for local health services in Bergen County, New Jersey.

Bergen County is a suburban area across the Hudson River from New York City. It has a larger than usual population of white-collar and professional workers and a high level of education. Many of its residents previously lived in New York City and are accustomed to the ready availability of a wide variety of public services. The county government has provided a number of high-quality health services for county residents. To a considerable extent, they are administered by the Bergen Pines County Hospital, an institution for the treatment of tuberculosis and other chronic illnesses.

A challenge was offered by the prospect of coupling sanitary inspection services on a contract basis with those municipalities (Bergen County has seven) which did not provide their own independent services, and medical services on a county-wide basis to augment and extend existing hospital services.

Operating as a county institution for the treatment of chronic diseases, Bergen Pines has established effective working relationships with the four general hospitals in the county, and flow of patients in both directions is accomplished with a minimum of institutional barriers.

It was proposed that a division of preventive medicine and public health be organized under the direction of a specialist in public health. He should be available for appointment as health officer in those municipalities which contract for service. A non-medical health officer is suggested as assistant director, who will be responsible for negotiations with local municipalities for sanitary inspection and other environmental health services. A public-health nurse director would be responsible for coordinating hospital nursing service with the visiting nurse associations, municipal board of health nurses, and the nursing staffs of the county's four general hospitals.

In response to numerous inquiries and requests for explanation from municipal officials, a price schedule was drawn up for the several types of environmental health services which could be purchased by the municipalities. A number of local boards indicated a desire to enter into contracts as soon as possible.

This opportunity for the exploration of new patterns for health services is abetted by a number of favorable assets. The population affected has a higher than usual level of social and political awareness. There is a long history of popular support for ad-

vanced programs in the field of health and welfare. This experiment is based upon utilizing an unusual opportunity in an unorthodox manner.—*Jesse B. Aronson, M.D., M.P.H.*, director, division of local health services, New Jersey State Department of Health, Trenton.

Report Success in Rehabilitation Of Schizophrenic Patients

Chronic hospitalized mental patients can be returned to productive lives in the community, we believe on the basis of results in the Vermont project for the rehabilitation of chronic schizophrenic patients.

Between January 1, 1955, when the program began, and August 15, 1960, 367 patients were referred to the rehabilitation program. As of August 15, 1960, 255 or 70 percent had been released, and 211, or 57 percent, were still out of the hospital on that date.

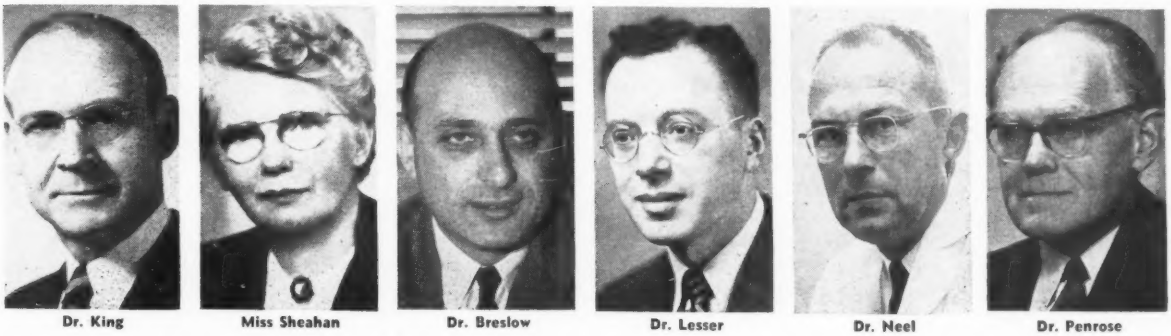
Of the 211, 128 returned to the community directly; 83 went first to one of the three rehabilitation houses operated by the Vocational Rehabilitation Division.

to plans for the rehabilitation of such patients with the assistance of the Vocational Rehabilitation Division. Almost all of this first group left the hospital and were employed before the end of 1955.

A second important aspect of our program has been group therapy. We now have seven different groups. One is made up entirely of patients who have been released but who have had to return to the hospital for further assistance. These patients meet with the rehabilitation counselor who has been working with them since they were referred to the project. Two groups include a few of these and also patients who are about ready to leave the hospital and who need orientation to community services and agencies.

Three of the groups are composed of both sexes and are conducted by co-therapists. The emphasis is largely on socialization and activity, including trips to stores and other places of interest in the community. The adolescent patients in our hospital high school have frequent group therapy sessions.

We now have four rehabilitation wards of about 30 beds each, two for men and two for women. These are open wards which have been thoroughly renovated and made as homelike as possible.



Dr. King | Miss Sheahan | Dr. Breslow | Dr. Lesser | Dr. Neel | Dr. Penrose

Outstanding personalities at the American Public Health Association meeting included president-elect Charles Glen King, Ph. D., executive Director, Nutrition Foundation, Inc., and president Marion W. Sheahan, deputy general director, National League for Nursing. Lester Breslow, M.D., chief, Chronic Disease Program, California Department of Public Health, accepted an award on behalf of the program, given in recognition of the pioneer state disease control plan in the field of alcoholism, obesity, and other chronic conditions. The Crippled Children's Program, the Children's Bureau, U. S. Department of Health, Education, and Welfare received a group award for its part in helping over four million handicapped children; Arthur Lesser, M.D., director, division of health services, accepted the award. James V. Neel, M.D., Institute of Human Biology, University of Michigan, and Lionel S. Penrose, M.D., University College, university of London, London, England were honored for their work in human genetics and effects of radiation on humans and their offspring.

The first of these houses was opened in 1956, to provide a place where patients who had no home, or at least no suitable home to go to, could live during the first months of release from the hospital. There are now three houses, located 12 to 25 miles from the hospital. Every attempt has been made to make them as homelike as possible. Each house has a capacity for a relatively small number of patients; 12 is considered maximum.

An important aspect of our program has been the continued use of ataractic drugs, both while patients are in the hospital and, for a majority of patients, after their release. The hospital began extensive use of these drugs in 1954. The hospital's psychologist began group therapy with a dozen patients whose condition had been improved by medication but not sufficiently for release. His previous experience with vocational rehabilitation, interest in the subject, led

In a further effort to promote group feeling and cohesiveness, the occupational therapy and recreational therapy have been planned for these patients as groups. The occupational therapy program is aimed at encouraging the patients to become mutually concerned with each other and with group activities, and providing opportunities for learning fundamental skills needed for life in the community. Recreational therapy is planned to promote socialization in the hospital and the ability and liking for participation in social events in the community.

Another important goal of our program is to help the patients build bridges between the hospital and the community. To this end there is a system of graded privileges beginning with the open rehabilitation wards and ground privileges and extending to town privileges.

(*Continued on next page*)

Parties are held at the rehabilitation houses, to which rehabilitation patients in the hospital are invited, and parties are held at the hospital to which former patients now in "rehab" houses are invited, along with other interested persons. Persons who seem likely to go to one of the "rehab" houses spend several weekends there prior to transfer in order to become oriented to this new situation and to become acquainted with the other people living there.

Industrial therapy and the employment of patients in the local community serve as further bridges for the patients. We have always had a high proportion of our hospital population working, but too often the work done was for the convenience of the hospital. Now work is planned in accordance with the patients' post-hospital plans. The employment of an industrial therapy supervisor facilitates this. Ratings are made monthly by community employers as well as hospital work supervisors, and these reports are compared with those made by hospital personnel who see the patient in other capacities.

The counseling program of the Vocational Rehabilitation Division begins as soon as the patient is ready after being accepted by the project and continues when the patient leaves the hospital for a job in the community or to go to one of the rehabilitation houses. One of the counselors visits a house in each of two urban areas every other week for an evening. House clients and ex-patients living in that area are seen in consultation as problems arise.

Last, but by no means least, is our progress in becoming a therapeutic community. In our hospital the philosophy is that anyone may establish a therapeutic relationship with patients. Attendants and other employees now have a therapeutic attitude instead of the previous custodial attitude. Every person's opinion is valued and his opinion utilized. Many hours are spent in conferences between professional members of the staff, attendants, and work supervisors. Patients have an opportunity for self-expression in patient-staff conferences.—*George W. Brooks, M.D., William N. Deane, Ph.D.,* and *Donald M. Eldred,* Vermont Project for the Rehabilitation of Chronic Schizophrenic Patients, Vermont State Hospital, Waterbury; and *Marjorie B. Taylor,* supervisor, case services and counselor training, Vocational Rehabilitation Division, Montpelier, Vt.

Efficient Hospital Operation Needs Consolidated Planning

Persons in public health, medical practice, and hospital administration are often distressed by the public's criticism of medical care and its control. I believe, however, that the current interest in health care constitutes a solid public recognition of its high quality.

In California, we have had the opportunity to observe the voluntary system at work in a most difficult environment. The state's population has more than doubled since 1940, and building and using hospitals to serve this public has involved a staggering capital investment and public operating support.

It is not surprising that the essentially uncoordinated efforts of the hundreds of independent organizations involved in this hospital expansion have created problems. The institutions which have been created have expanded the hospital bed capacity, but not always effectively because of the type, size, and location of individual hospitals. Lack of coordinated development has produced duplication of expensive services and facilities, gaps in essential services, competition, inappropriate use, overbuilding in some areas, and underbuilding in others.

In all recent studies of hospital service, there are certain common characteristics. There appears to be a general agreement that real pressure exists to develop improvement in hospital planning in the interest of efficiency. There is recognition that the professions, voluntary agencies, and government are actively involved; there is common recognition that both statewide and local viewpoints should be reflected in planning, leadership, and control.

The issue we face is the development of a method to mobilize the interest and force of the public, the health professions, hospitals, other voluntary agencies, and government to produce the most effective public service. It is probable that the solutions will vary but certain primary concepts are necessary to all.

Hospitals and related health institutions are now a vital component of medical care. Without the organization, personnel, equipment, and buildings which the institution provides, modern medical practice would be impossible. In contrast with the past, when a hospital was a loosely organized workshop for the physician, the community hospital today has a responsibility to function as a center for comprehensive health care in the community.

The public nature of service provided by hospitals needs to be recognized. Hospitals have a primary responsibility for providing community service, with business and financial aspects of their operation being secondary. They cannot compete in the world of big business, nor would the public permit them to do so.

Gaining the most effective use from all health resources begins with planning. Some of the issues to be met include establishment of long-range planning objectives for all regions in each state, and definition of the characteristics of hospitals which are planned in each community as to size, type, and location.

In some instances, voluntary organizations have developed the nucleus around which planning and leadership should be built. In other situations, primary planning activity has been undertaken by government. Though there are those who believe government must be kept out of planning and its implementation at all cost, it is my personal judgment that the voluntary system cannot survive without the public backing and support which can be organized most readily through governmental action.

There should be a statewide official basis for planning and for encouraging compliance of individual hospitals.—*Gordon R. Cumming,* chief, bureau of hospitals, California State Department of Public Health, Berkeley.

Staffing, Leadership Spark Discussions at Military Meeting

Adopting the theme "The Military Role in Medical Progress," the Association of Military Surgeons of the United States held its 67th annual convention October 30-November 2 in Washington, D. C.

Several awards were given during the meeting. Lewis J. Griffith, Ph.D., chief of reference laboratories for the VA cooperative study on hospital infections and antibiotic-resistant staphylococci, received the Stitt award in recognition of his work.

Beatrice Finkelstein, nutritionist in the physiology branch, Aerospace Medicine Division, Wright-Patterson AFB, Ohio, received the seventh annual McLester award for her contributions and continuing work in the development of a suitable nutrition program for future astronauts.

The first Federal Nursing Service award was presented to Lt. Hope McIntyre, NC, U.S. Naval Reserve, who is presently assistant head, Nurse Corps Training Division, U.S. Naval Medical School, National Naval Medical Center, Bethesda, Md.

TOPICS presents the following abstracts of representative papers given at the meeting.

Study Reveals Federal Hospital Efficient With Smaller Staff

There are now nearly a half million professional nurses in the United States. In addition, another half million persons are employed as auxiliary nursing personnel. Although these may seem like large numbers, there is a severe and persistent nursing shortage.

Proposed solutions to the nursing shortage fall into two broad categories. Efforts to increase recruitment into the profession and to attract inactive nurses may be called the quantitative solution. The qualitative solution is concerned with increasing the productivity of the existing nurse supply through such means as improvement in the utilization and educational preparation of nursing personnel.

One finding of an early study was that some hospitals with smaller staffs provided services that were as adequate as hospitals with larger staffs. In an attempt to find out why, we conducted a study in three general hospitals that provided care to the same number of patients but differed in a most important way: one hospital had a much smaller nursing staff.

The hospital with the smaller staff was a federal hospital, since it was found (in the AHA's 1958 survey) that non-federal hospitals employed, on the average, twice as many nursing personnel for each patient as did the federal hospitals. The two non-federal hospitals chosen were both voluntary community hospitals.

During the autumn of 1959 an intensive study was conducted in the three hospitals to determine what factors contributed to the fact that the federal hospital was operating with 49.9 nursing personnel per 100 patients, while the non-federal hospitals were using 113 and 125 personnel per 100 patients.

Study findings indicate that about 20 percent of the total difference in staffing could be attributed to a lighter workload in the federal hospital; 20 percent could be due to the fact that the federal hospital was understaffed, and 60 percent seemed to be related to differences in organizational characteristics of the federal and non-federal hospitals.

Among the characteristics of the federal hospital contributing to lower staffing were: the use of large open wards, a more simplified organizational structure with larger, more homogeneous and more flexibly staffed subdivisions, lower turnover among personnel, the use of a central dining room to feed nearly half the patients, and more conscious use of administrative processes including an effective system of personnel policies and a comprehensive budget system which forces attention to economy and efficiency.

(*Continued on next page*)

Lewis J. Griffith, Ph. D. (l.), Veterans Administration Hospital, Batavia, N.Y., receives the seventh annual Stitt Award from Dr. Ward J. Haas, director of operations, Pfizer Laboratories division of Chas. Pfizer & Co., Inc., at annual dinner of the Association of Military Surgeons. In addition to the plaque, the award carries a $500 honorarium, and is presented for meritorious work in antibiotic research.

The 60 percent difference attributed to all organizational characteristics of the federal hospital is a difference of 37.2 nursing personnel per 100 patients. By conservative estimate, a little more than half of this difference appears to be attributable to greater administrative efficiency in the federal hospital.

While it is true that hospitals are understaffed, some of the nursing shortage probably lies in failure to make the most productive use of presently employed personnel. Results of this study strongly suggest that the shortage is not entirely one of numbers, but may also be attributed to the nature of the nursing-service administration. — *Eugene Levine, Ph.D.*, chief, statistical analysis branch, Division of Nursing Resources, U.S. Public Health Service, Washington, D.C.

Nurse Leadership Qualities Must Expand in Modern World

In spite of the frequency of its discussion, the concept of leadership is still elusive to those who studiously attempt to capture it. Those who would think about leadership in nursing must clarify what is meant by the word leader. A leader exercises a role that necessitates a forward position in relation to a group. The choice to lead, however, is not his, but that of the group. The group chooses whom it will follow. Leadership is a group activity and cannot exist apart.

Much is said about the changing concepts of the leadership role. There are lists of criteria for the identification of leaders in our profession today. I do not believe that the basis of leadership changes. True, what the leader of today is expected to do and the forms his leadership will take may differ. But these are only technical details, superficial compared to man's need for inner vitality and the power to lead.

The quality of selflessness in leaders is not in the repudiation of self, but rather in the ability and the willingness to work through others. It has been said that we could unleash limitless possibilities by not worrying about who gets the credit.

Being human has ceased to be a quality that is allowed begrudgingly to nurses. It is expected of all nurses and demanded of leaders. The person must show through — a person who can share feelings with others, give and receive affection, and exercise, with wisdom, the right of being human. Denial of the person — the hiding of self behind the cloak of a titled office or a starched white uniform — is no longer tolerable. A leader knows the difference between being human and being weak, and senses the difference between comradeship and familiarity.

The leader in a world profession must be a world citizen. The professional curriculum of today must center on the the fact that the human community is one. With the proper use of present-day miracles in transportation and communications, there will be even more dramatic opportunities for stimulating interchange within this community and with an ever-widening group of associates. — *Maj. Drusilla Poole, ANC*, instructor, department of nursing science, Army Medical Service School, Brooke Army Medical Center, Fort Sam Houston, Texas.

Extensive VA Test Compares Efficacy of Tranquilizers

The introduction of tranquilizing drugs initiated a vast number of clinical investigations. The Veterans Administration, with its nationwide system of psychiatric hospitals, planned and carried out several carefully controlled cooperative studies to evaluate the drugs and compare them with each other. Such studies had the advantage of including a large, well-defined sample of patients treated in multiple hospital and outpatient settings.

The research protocols for the several studies varied to a degree as necessary for the purpose of each study. They were, however, similar in several respects. They were all conducted by a double-blind technic. The data obtained were forwarded to a central laboratory for evaluation.

In the first study, the effectiveness of chlorpromazine and promazine were compared with an active placebo (phenobarbital) and plain placebo. Both phenothiazines were found to be more effective than either of the control substances. Chlorpromazine was found superior to promazine.

In another study the effects of five phenothiazine derivatives, chlorpromazine, mepazine, perphenazine, trifluprомazine, and prochlorperazine were compared with each other and with a control substance. Each of the phenothiazines was effective as compared with phenobarbital. Mepazine was found to be less effective than any of the other phenothiazines; the other four were found equally beneficial.

The third study, also conducted in hospitals, attempted to determine whether the addition of a stimulator drug to a previously established dosage of chlorpromazine would stimulate further improvement in long-term, apathetic and withdrawn schizophrenic patients. All patients had previously been treated with chlorpromazine for two or more months, many for one to five years.

The drugs added were dextro-amphetamine, imipramine, isocarboxazid, trifluoperazine, and placebo. Adding dextro-amphetamine was found to increase hostile and paranoid belligerency and thinking disturbance. This combination also brought on a weight loss, in some cases so much that withdrawal from the study was considered necessary. Of the other drugs, no combination was found to be more effective than chlorpromazine with placebo.

The last study, done in an outpatient setting, attempted to determine whether a tranquilizer used as an adjunct to individual psychotherapy was effective in controlling or reducing tension, anxiety, and hostility. No definite advantage was found when chlorpromazine and meprobamate were used conjunctively with psychotherapy alone or with either of the control substances. Patients receiving either of the active drugs showed more hostility than those receiving psychotherapy only or psychotherapy with placebo. — *J. F. Casey, M.D.*, director, psychiatry and neurology service, Veterans Administration, Washington, D. C.

Diet Experts Study Trauma Reaction, Heart Disease, I. V. Feeding

The following items are abstracted from papers delivered at the Fifth International Congress on Nutrition, Washington, D. C., September 1-7, 1960.

Nutrition Regimen Tested In Heart Disease Prevention

For the last two years, the Heart Disease Control Program of the Chicago Board of Health has been engaged in long term investigation on the possibility of achieving primary prevention of clinical coronary heart disease in high risk, middle-aged men.

The coronary prevention evaluation program is based on the accumulation of research evidence indicating that nutrition is a key factor in the causation of coronary disease. It is now known that middle-aged men with combinations of abnormalities such as obesity, hypercholesterolemia, hypertension, diabetes mellitus, hypothyroidism, renal damage, and a positive family history of premature vascular disease are high-risk susceptibles to coronary disease. Certain combinations of the defects are associated with at least one chance in two of developing clinical coronary heart disease before age 65.

As of August 1, 1960, 75 high-risk men aged 40 to 59 were participants in this program. Mean height for the group was 68.8 inches, mean weight 190.3 pounds (27.5% overweight). Mean cholesterol level was 284.7 mg. percent; the normal value is less than 225 mg. percent. After six months on the recommended nutritional regimen, mean weight was 173.2 lbs., a loss of 17.1 lbs. or nine percent. Mean serum cholesterol level was 236.0 mg. percent, a decline of 48.7 mg. percent or 17.1 percent.

Detailed analyses of food records were kept by machine data processing methods. The methodology of the program includes thorough indoctrination of the participant and his wife, as well as extensive medical and nutritional evaluation. The participant keeps a one-week record of everything he eats, and supplementary data on his nutritional habits are obtained by questionnaire and interview. Based on the total facts, the physician-nutritionist team prepares a recommended nutritional pattern aimed at reducing both weight and serum cholesterol.

The recommended pattern of food intake is designed not only to achieve the proper quantity of calories, but also the desired quality of nutrients, particularly the reduction of saturated fat and cholesterol intake, with an optimal ingestion of proteins, amino acids, vitamins, minerals, and essential fatty acids. The fat intake is regulated so that about 30 percent of calories are derived from total fat, and no more than ten percent from saturated fat. If elevated blood pressure is a problem, salt intake is also regulated. — *Jeremiah Stamler, M.D.*, director, heart disease control program, Chicago Board of Health, assistant professor, department of medicine, Northwestern University Medical School, Chicago; and associates.

Malnourished Patients Respond To Intravenous Fat Therapy

Over 900 units of fat emulsion have been given intravenously to more than 200 patients at the Hospital of the University of Pennsylvania since 1952. Most patients received a 15 percent cottonseed oil emulsion, packaged in 500-600-ml. units.

Intravenous fat was given to sick surgical patients who had serious chronic disturbances of the gastrointestinal tract and were severely malnourished. Most patients were given multiple infusions; 30 patients received from 10 to 73 units each for a total of 574 infusions. The fat emulsions were given concurrently with carbohydrate and protein into the veins.

Most patients were given from 2,000 to 3,000 calories per day parenterally; often this was the only food tolerated by the patient. Certain patients gained weight on a total parenteral nutrition.

Three problems have been of clinical concern in the use of these emulsions. These are the immediate reactions of the patient to an individual infusion, the reactions of the patient to multiple infusions, and definition of the parameters of the usefulness of the fat emulsions.

The immediate reactions occurring with individual infusions are almost never worse with succeeding infusions than they are with the first. Reactions have consisted of fever, chills, allergic phenomenon, and aberrations of the pulse and blood pressure. These reactions are relatively infrequent with the presently

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available emulsions when given at the rate of one infusion daily at 200 ml. per hour.

The second problem – reactions of the patient to multiple infusions – is more ominous. This "late reaction" has occurred only when patients have had 10 or more infusions, and consists of inconsistent changes in the blood coagulation, associated with mild petechiae to frank hemorrhage, with or without the symptoms and signs of hepatitis. The etiology of this reaction has not been elucidated.

Fortunately, although the incidence of this reaction is not known, it appears to be about 10 percent, based on the experience of others. We have not seen a clear case of this reaction in any of our patients.

Definition of the parameters of clinical use of the emulsions depends greatly on the severity of the reactions. At first, when experience was meager, we used the emulsions only in terminal cancer patients. As the emulsions improved and appeared to be of benefit, we began to use them in many patients.

We would use the presently available emulsion in any patient who is going to need 10 days or more of parenteral nutrition and who did not have immediate reactions. We would not give it to patients who can be expected to resume an adequate oral intake before they become malnourished. – *Jonathan E. Rhoads, M.D.,* professor of surgery, and *Herndon B. Lehr,* both of the University of Pennsylvania Schools of Medicine, Philadelphia.

Nourishment Levels Influence Trauma Reaction

The nutritional status of the surgical patient becomes increasingly important as procedures become more extensive and are offered to those previously considered unacceptable risks.

In our study dealing with the effect of injury on the growing animal, a completely synthetic, chemically defined diet containing all nutrients known to be necessary was used. The experimental animals were 40 Sprague-Dawley white rats, divided into five groups, some of which were subjected, under anesthesia, to a crush injury of the thigh sufficient to produce a fracture of the femur. These problems were investigated:

(1.) What is the effect of the injury on growth rate as measured by nitrogen balance and weight gain?

(2.) Can any harmful result of injury on growth rate be favorably altered by providing reasonable increments of a balanced diet?

(3.) How well is the increased diet retained?

(4.) Are any benefits apparently derived from adequate nutrition substantiated by actual chemical analysis of the composition of the carcasses of animals sacrificed after the termination of the experiment?

(5.) Are nutrients of equal value when they are fed by tube and when they are provided for the animal to ingest at will?

Our results indicate that major injury does adversely affect weight gain and nitrogen retention in growing animals. However, it appears that these effects can be moderated to the benefit of the organism by supplying a balanced diet in adequate amounts. Injury is less harmful to the growth of well-nourished than poorly-nourished animals.

Data support the hypothesis that the injured animal can utilize balanced dietary supplements for growth, although nutrients are not used as effectively as they are by the uninjured animal. When the same amount of diet is provided for ingestion at will, it is utilized more efficiently than when it is force-fed through a tube. – *Howard M. Radwin, M.D.,* department of surgery, division of urology, Tulane University School of Medicine, New Orleans; *M. Rechcigl, Jr., Ph.D., M. Winitz, Ph. D., and J. Greenstein, Ph. D.,* laboratory of biochemistry, National Cancer Institute, Bethesda, Md.

"Pathogenic Situations" Explored in Cardiac Accidents

During the last two decades, numerous investigations on the role of nonspecific stress in the development of various pathologic lesions gradually led to the concept that many diseases are not caused by individual pathogens, but rather by pathogenic situations. It has become increasingly clear that an agent does or does not produce disease, depending upon a variety of conditions, some of which have now been definitely identified as being determined by the "adaptive hormones" – the hormones most conspicuously involved in adaptation to stressor agents.

Since our first observations on stress, we have wished to explore the mechanism of the fatal heart accident, with a view of finding some remedy against it.

Sudden cardiac death occurs most frequently after some acute exposure to stress, such as intense muscular effort or nervous excitement. However, to analyze the mechanism of a disease, it is essential first to reproduce a simile of it in experimental animals, so that potentially dangerous treatments may be tested.

This was not possible in the case of the fatal heart accident, because even if animals are killed by stress, they die from reasons other than the so-called acute cardiac infarcts or necroses. We have now succeeded in clarifying the conditions under which stress will regularly produce such sudden heart accidents in experimental animals.

If experimental animals are pretreated with certain corticoids and sodium salts, they do not develop a heart accident. If, however, after this conditioning the animals are exposed to stressors – hot or cold baths, surgical injuries, forced muscular exercise or restraint – they develop acute heart accidents, owing to necrosis of portions of the cardiac muscle.

It was possible to show that potassium chloride and magnesium chloride offer certain protection against this type of cardiac disease in animals. Experiments designed to examine the effect of variations in dietary chloride intake upon various cardiopathies have shown that, in the rat, a number of diverse cardiac lesions are uniformly aggravated by a low chloride diet and prevented by a dietary chloride excess. – *E. Bajusz, M. D., and H. Selye, M.D.,* Institut de Medecine et de Chirurgie Experimentales, Universite de Montreal, Montreal, Que., Canada.

Discusses Planning for the Future Hospital, Fund-Raising and Preventive Maintenance

The following items are abstracts of talks presented at the American College of Osteopathic Hospital Administrators' October 30 meeting in Dallas.

Administration: Where Do We Go From Here?

In the years ahead, nursing units of 30 beds will give way to larger units which are more economical. With the larger unit we achieve several things: lower buildings, with resulting savings in elevators, plumbing and heating pipes, stairwells, dumb-waiters, pneumatic tubes; development of true managerial stature for the head nurse, who no longer needs to give bed baths or fill in for the absent or help with dressings; better use for such bases as conference rooms, examination and treatment rooms, and storage closets; reduction of the number of organized units within our hospital with increasing success in conference technics; elimination of the impact of the no-show employee; and a greater flexibility.

As planners create the optimum unit in brick and mortar, administration and nursing will create the organizational staff for better service to the patient. Hospitals will have to build in more comfort items. Complete air conditioning will be a must. Patients will continue to demand the addition of all comforts possible, such as electric beds, radios and TV sets, inter-com systems, and better illumination.

Future hospitals will place more emphasis on balance: in service, in space, and in potential. While certain traditional hospital functions move out, new functions move in which are directly related to patient care. This means that the future hospital will specialize in the areas of direct care and may farm out other services; this will, of course, alter the need for space.

With salary taking 65-70 percent of the hospital budget and with no reason to believe that union activities will lower personnel costs or numbers, we must look to mechanical devices to transport supplies, add up bills, count blood cells, wash, rinse, and extract laundry, shake and fold sheets, convey trays while they are being assembled, lower and raise beds, wash the dishes, and develop x-ray films. Hospitals without automation will find it hard to keep afloat.

Problems the hospital of the future must face include the old ones of infection, ventilation hazards, cross-traffic hazards, newborn nursery hazards, tuberculosis. In addition, we must consider the possible admission of psychiatric patients to the general hospital; the sick aged and their rising numbers; and prepayments—an area which will affect the hospital more than any other force. Flexibility and wider vision will be the fashion for tomorrow's planning. —*Robert S. Hawthorne,* director of professional relations, northern division, Group Hospital Service, Inc. (Blue Cross), Dallas.

John C. Zemke (r.), new president of the American Osteopathic Hospital Association, accepts the gavel from past president David W. Lawrence.

Factors in Successful Hospital Fund-Raising

Six basic factors are necessary for successful fund-raising for the osteopathic hospital:

1. A justifiable and motivating need and appeal.
2. Available potential lay and professional leadership dedicated to the appeal.
3. Unity and internal cooperation within the professional staff and the lay board, if the latter exists.
4. Reasonably favorable public relations toward osteopathy and the particular hospital or projected hospital in the community and service area. We say "reasonably" because you cannot always have maximum favorable positive public relations prior to a campaign, and the campaign itself is a part of your public relations program.
5. A constituency of patients, interested business, industry, and labor sufficient in size and responsive

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Lined up on the steps are officers of the American College of Osteopathic Hospital Administrators. Reading (l. to r.) are Philip Rosenthal, vice-president; Lois H. Beane, R.N., secretary-treasurer; and George A. Fuller, Jr., president.

to the appeal which can be motivated to generous giving and solicitation activity.

6. A tested, proved plan of direction and management for the conduct of the campaign appeal.

The methods of financing are four: (a) sale of debenture bonds; (b) sale of endowment life-insurance policies; (c) borrowing in its many forms; and (d) fund-raising. There are no other ways.

Bonds and insurance are actually the same as borrowing. You must eventually pay the principal or face amount of either. In borrowing, principal and interest must be paid back. Hospital officials only fool themselves when they go into any type of borrowing. They must scrape to meet interest payments, and if they are financed by a debt program many eventually find they must close their doors. In fund-raising the money doesn't have to be paid back, nor is there any interest to meet.

Many by-products result from a successful fund-raising campaign, including more future voluntary giving to the hospital; lay leadership in the form of a board, perhaps also a lay advisory body, and a broadened constituency in general; unification of the professional staff; and the fact that many donors will become first-time patients of osteopathic physicians and hospitals.

Fund-raising is the lowest net-cost method of financing hospital expansion, relocation, or new construction. Usually the total cost of the campaign is less than the first year's interest cost if the hospital had borrowed or sold bonds in a sum equal to the campaign goal. In addition, it has been proved statistically that three to five times more money is raised in a professionally directed campaign as opposed to a home-made fund-raising effort.—*Douglas G. Burrill,* president, Burrill, Inc., Kansas City, Mo.

Preventive Maintenance: Why's and Wherefore's

Preventive maintenance will prevent breakdowns, cut operating costs, give the plant more efficient operation, and extend the life of the equipment and buildings. The key is a regular schedule which must be adhered to.

The following steps will help in setting up a preventive maintenance program in the hospital:

1. Have a meeting of all persons involved to review the basic aims of the program, its operation and benefits. All department heads should be included.

2. Decide which equipment should be put on preventive maintenance. Criteria include: Is the cost of the machine over $500? Is it a critical item? Is standby equipment available in case of failure? Does the cost of preventive maintenance exceed the expense of down time and cost of repair or replacement? Does the normal life of the equipment without preventive maintenance exceed the hospital's needs? Is obsolescence expected faster than decay?

3. Survey the equipment, study past work orders or breakdown history, talk to operators, find out manufacturer's recommendations. Determine the frequency of inspections needed.

And here are the other AOHA officers — l. to r., Karl B. Greenlee, president-elect; George C. Wolf, D.O., first vice-president; L. C. Baxter, second vice-president; and Irvin J. Biggs, secretary-treasurer.

4. Set up a method of handling the inspections.

5. Develop the paperwork and find a means of handling it. Basically you will need: an equipment record card, a check list and work sheet, an inspection schedule, and an equipment cost record.

A hospital which has a fairly complete maintenance staff probably will not need to add personnel. However, if manpower or the cost of hiring specialists is a big factor, there are commercial service organizations which will perform preventive maintenance on specalized equipment on a contract basis at a cost below that of employing full-time maintenance personnel on the hospital staff.

The preventive maintenance program has the following advantages: (1) years of extra life are added to equipment, releasing funds to be used elsewhere; (2) costly down time is avoided; (3) costly major repairs and replacements are avoided; single parts can be replaced rather than complete assemblies; (4) equipment operates more safely and efficiently; (5) records will show up equipment of poor quality; and (6) records kept on a preventive maintenance program will show the need for a proper spare parts inventory.

Preventive maintenance is inexpensive if looked upon as insurance to protect your investment in equipment, to keep the hospital functioning, and to keep breakdown maintenance cost down.—*Norbert L. Matteson,* service manager, American Sterilizer Co., Erie, Pa.

IHA Conventioners Discuss Home Care Programs, Psychiatric Units

The 38th annual meeting of the Illinois Hospital Association attracted 376 persons, making it the largest meeting in the history of the organization.

George K. Hendrix, new president of the 285-hospital association, is administrator of Springfield's Memorial Hospital. Chairman of the IHA committee on planning, Mr. Hendrix has been a member of the association's board of trustees since 1957, and is also chairman of the Hospital Licensing Board and a member of the Advisory Hospital Council of the State Department of Health.

TOPICS herewith presents selected abstracts from papers presented at the meeting.

Charles E. Mattix, right, administrator of Ryburn Memorial Hospital, Ottawa, Ill., saves some of his questions for an after-the-meeting talk with Paul Wenz, director of the home care program at Pekin Public Hospital and member of the panel on that subject.

Home Care Problems

Mount Sinai Plans Aims at Indigent, Medically Indigent

Our home-care program was begun in 1953, after extensive study had indicated a need for such service. The program was aimed at the indigent and medically indigent among our general medical-surgical adult patients.

Our reasons for starting a home-care unit were several. The major reason was the gap existing in medical care for the chronically ill patient who was discharged because he was not in need of complete hospital care, yet who was too ill to come to the clinic for continuing care as an outpatient.

By instituting home care we also sought to reduce the number of readmissions among chronically ill patients, and to release needed beds for acute cases.

It was difficult to estimate the community demand for home-care services. The full impact of such a program only becomes apparent after the program has begun.

We began in 1953 by budgeting and planning for 20 to 25 active home-care cases at one time, or 40 to 45 per year. Our census has been steadily increasing, and we now serve nearly 125 per year. During this same time, there has been relatively little change in the hospital and clinic populations.

A patient is referred to the home-care section by a private physician, and is then assigned a home-care physician. The physicians participating in the program are staff doctors, and are paid directly by the hospital for their visits. The patients are assigned geographically for the convenience of the doctors.

There is no formal panel of consultants, but informal consultations are often held among the physicians serving on the program. The patient has direct access to all the facilities of the hospital in any emergency, including ancillary services and nursing care, as well as medical care.

The social worker is a key member of the home-care team, evaluating each patient referred, and following up with complete case-work service.

Since 1957 we have also had the services of a rehabilitation team. An occupational therapist, physical therapist and speech therapist make up the team. The O.T. and P.T. work under the direction of the hospital's psychiatrist.

The rehabilitation services have added immeasurably to the home-care program. Patients often regress upon their return home and do not maintain independence without proper supervision. The physical therapist in particular works in both a functional capacity and as an instructor in living. The rehabilitation service provided in the home have prevented many

(Continued on next page)

Speakers and other VIPs at the annual luncheon are, l. to r.: Jack B. Edmundson, administrator, Doctors Hospital, Carbondale, outgoing trustee; Delbert L. Price, administrator, Children's Memorial Hospital, Chicago, outgoing president; George K. Hendrix, administrator, Memorial Hospital, Springfield, new president. W. R. William, administrator, of the Suburban Cook County Tuberculosis Hospital District, Hinsdale, member of the board, who presided at the luncheon and also served as program chairman; Raymond A. Fleetwood, administrator, Fairfield Hospital, new trustee; and Rev. John Weishar, director of Catholic Hospitals, Diocese of Peoria.

patients from deteriorating from lack of activity.

Bedside nursing is provided by the Visiting Nurse Association, on referral of the patient's physician. A public-health nurse is assigned to the hospital's dispensary to train student nurses in the workings of the program.

The medical director of the dispensary acts as coordinator of the home-care program. Regular monthly evaluation meetings are held, in which all personnel concerned discuss the improvement of particular patients.

We have no concrete statistics available, but the home-care plan has definitely contributed to fewer readmissions and shorter hospital stays. More patients have done better in a shorter time, and more patients have returned to their homes. Psychological gains have been made through productive activity, and they have affected patients' general health.

Cost of the program is relative. If it is compared to hospital care for these patients, it is considerably cheaper. If it is compared with no care at all, it is expensive. — *Nathan W. Helman,* director, Mount Sinai Hospital, Chicago; *Eleanor Scher,* director, Samuel A. Goldsmith Dispensary, Mount Sinai Hospital, Chicago.

Pekin Plan Includes Housekeeping Food Services

Our home-care unit was planned as the fourth and final step in a progressive patient care program. Our main objectives were to cut down on hospital utilization and admissions, to lower the hospital cost to the individual, and to provide special care for the shut-in, including good nourishment.

A committee of three doctors, the home-care director, and the hospital's administrator serve as the administering body for the program.

The unit is completely hospital-based and hospital-financed through regular channels. Physicians working with patients in the unit are the exception; their services are charged directly to the patient.

Any chronically ill patient is eligible for home care who can be safely and adequately cared for in the home, as medically determined by the doctor and socially-economically determined by the home-care department head. Investigation must prove that the patient's home is suitable for home care, and that family members are willing and able to assume responsibility for him.

Several services are provided under the auspices of the home-care unit. A visiting homemaker will spend not less than two, nor more than eight hours at a patient's home, doing housework and light laundry. Full-time housekeeping service is also available. Oxygen, supplied by a local distributor, is available in Pekin, picked up or delivered, for $7 per tank. Transportation cost in the county is added.

The visiting nurse, recruited and trained from our own hospital, visits the home and evalutes the nursing situation. Her evaluation is added to those of the doctor and the home-care department director. Regular nursing calls are charged on a sliding scale according to the distance of the home from the hospital, ranging from $3 within 10 miles to $5 beyond 20 miles. If physical therapy is administered by the visiting nurse, the charge is included in the cost for the nurse's call. If the physical therapist is called, regular hospital rates prevail.

Laboratory and miscellaneous services are charged at regular hospital rates, or as close to them as possible. Orthopedic equipment is available for rental, and our "loan closet" lends out many items — beds, mattresses, wheel chairs — free of charge.

We also maintain a "meals-on-wheels" service for our home-care patients, for which a charge of $1.25 per day is made. At present nine patients are using this service. Meals are prepared by the hospital's dietary staff and consist of a hot meal for dinner; cereal, milk, and fruit for breakfast; and sandwich, milk, and fruit for lunch. — *Allen M. Hicks,* administrator; *Paul Wenz,* home-care director, Pekin (Ill.) Public Hospital.

Psychiatric Units

Education of the Community Must Precede Fund-Raising

In setting up our psychiatric unit, we were able to obtain information regarding the community needs from our predecessor in this special field, St. John's Hospital; from our four local psychiatrists; and from members of our own medical staff. All agreed such a

Panelists on the session devoted to Setting Up a Psychiatric Unit in a General Hospital, left to right: Mrs. Richard Heninger, R.N., Little Company of Mary Hospital, Evergreen Park; John L. McLaughlin, M.D., chairman, department of psychiatry, and Thomas E. Stark, assistant executive director, both of Little Company of Mary; George K. Hendrix, administrator, Memorial Hospital, Springfield; Mary Jane Ryan, social service worker, and Dorothy Todd, occupational therapist, both of Little Company of Mary. Chairman of the workshop was Emilia S. Todd, administrator of Little Company of Mary.

unit was necessary in order to render total care.

Before we went into fund-raising, we told the community clearly and concisely what we wanted to do, and why. We believe very strongly that this information should precede actual fund-raising. And having called upon the public for funds, it is very important to the community to have open house when the unit is completed.

The administrator must participate actively in fund-raising, and must work closely with the Department of Public Welfare, the architect, and even the janitor – who certainly knows better than the administrator how he wants a closet built.

We decided on a 28-bed unit, bringing the total number of psychiatric-unit beds in Springfield up to 59. Among the safety features we selected were detention screens on the windows where the more severely disturbed would be. In the convalescent area, we used half-inch instead of quarter-inch glass, which looks no different but is very difficult to break. In specified areas, we installed a door within a door. Most doors open into the room, and a patient may try to block the doorway. We cut out a section six inches shorter each way, with a lock but no knobs, and unexposed hinges. The main door opens inward; the inner door opens out.

We have oxygen piped into some rooms, but made a mistake in not having it piped into the electric shock room. We believe it should be in all rooms, and we are also replacing the special light switches, which have a key, with regular toggle switches, placed on the outside of the rooms.

In appearance, the unit is as near like the rest of the hospital as possible, so that the patient has no feeling of isolation, or being "different." We use dormitory beds believing that it's foolish to go to the added expense of regular hospital beds when we want the patients ambulatory and dressed.

We have two-bed units plus six private rooms, and wish we had more of the latter. We do not use rooms larger than two-bed, because while two can be congenial, three have more problems, and four still more problems. This, of course, is true of any type of patients. We use soft pastel colors, and plenty of them. There almost has to be provision to lock the unit, but we think it should not be locked, especially in case an emergency should occur. Sometimes patients do wander out, but we would rather have this than a locked unit. – *George K. Hendrix*, administrator, Memorial Hospital, Springfield.

Location in General Hospital Makes Total Patient Care Possible

One goal of a psychiatric unit is to be as physically close to medicine as possible. The psychiatric patient in a general hospital gets maximum general care, and other specialties are available for total patient care.

We use members of the Loyola University faculty for the medical staff in the psychiatric division. We want to become part of a permanent training program for residents, whom we hope to rotate through Cook County and Illinois hospitals' psychiatric units.

In July, 1961, national board examinations will have a section for psychiatry. State boards will shortly have the same. So for a hospital's interns to take rotating experience without psychiatry is bad not only for their showing in the examinations, but for their understanding of total care.

The need in our area is rather acute, as demonstrated by the full unit. There are detention screens in all areas; the unit is physically separate from the main hospital, and is locked. There are no restrictions within, however, and patients, regardless of degree of adjustment, share a common dining room. Detention is in four isolation rooms, two of which are separate from the unit, and must be reached from the outside. Thus far, all the rooms have not been used at one time.

Both psychotic and psychoneurotic patients are admitted, with admission under a psychiatrist. Most are depressive. A few are schizophrenic, but they require a protracted stay which the families generally cannot afford, and which our unit can't provide. Use of insulin lengthens average stay to five or six weeks with prior work-ups and follow-up treatments. Electroconvulsive therapy is predominant, and the stay is shorter because 12 to 15 treatments can be given in the space of three weeks.

The first few weeks of our operation there was a tendency for our own doctors to be more active than we desired. We did not make an issue of this problem, but talked to them individually, and it has just about disappeared. One reason we discourage their overactivity is to avoid having the unit used as a dumping ground for patients troublesome on other floors.

We give treatments in the patient's own room. It is easier for nurses to work in treatment rooms, of course, but patient resistance is much higher.

(*Continued on next page*)

The beds are separated by a curtain, which is closed. We use sodium pentothal with electric shock, so there is no restlessness by the first patient while the second is being gotten ready for treatment. We use two carts, one a routine medical cart, the other for the anesthesia and shock equipment and a portable respirator. The patient is supervised until he is up and ready for breakfast, a period of 15 to 20 minutes. —*John L. McLaughlin, M.D.*, chairman, department of psychiatry, Little Company of Mary Hospital, Evergreen Park.

O.T. Tailors Programs to Doctor's Specific Prescription

In some hospitals, occupational therapy is ordered on a blanket prescription; there is a tendency for the doctor to tell the therapist "You do whatever you think is best." This is wrong, since we do not necessarily know what is best, not being familiar with the patient's background. In our hospital, Dr. McLaughlin, who knows whether we are dealing with a depressed person, or one with suicidal tendencies, writes specific orders for us. We have our own form on which the doctor writes his objectives and how we hope to achieve them, and O.T. personnel add progress notes.

Our experience in working with rehabilitation patients was very helpful to us in planning the O.T. area for psychiatric patients. It must function in a separate area, where all equipment can be kept together. A patient could walk out with a pair of scissors, leave them in his room, and return to the area. We keep a close check and use only portable tools which can be locked up. Every tool is placed in a shadow box, which is checked before the patients leave. If any is missing, there is no resentment; rather, a helpful attitude in locating it.

Anyone planning to build a unit should make sure there are plenty of outlets for equipment, and adequate plumbing for the patients working with ceramics and paints.

Most women can sew, and most men can do handy work. If these fit within the doctor's orders, they are encouraged. Some like tedious work and if this, too, fits the prescription, they are also encouraged. The pampered woman (who often cannot thread a needle) and male executive initially resist occupational therapy, but generally become as interested as the other patients. There is no charge for O.T. Such a variety of materials are used, and so many scraps of this and that go into a finished product that a secretary would be needed to handle the paper work.

We hope to get a full-time therapist for recreational activities, since patients are hungry for something to do in the evening. We have parties once a week, movies (not too many, since the cost is prohibitive), walks, ping pong, and shuffleboard, and we are planning bowling which the patients are anticipating especially, since it will be an outside activity.—*Dorothy Todd*, supervisor of occupational therapy, Little Company of Mary Hospital, Evergreen Park.

Things to Come

New President Will Tackle Health Problems; Senators Plan Hearings

With the first cabinet appointment that of Abraham Ribicoff, governor of Connecticut, as Secretary of Health, Education and Welfare, it is expected that the wheels of the new political machine will start to move with speed. The fact that Ribicoff is not well-known in the field he will direct would indicate that he is a responsible person and an acute public censor, and may bring more talent and responsibility with him in integrating board policy.

Mr. Kennedy is very much interested in the renovation and modernization of the Hill-Burton program, Medicare, federal employees, nursing education, practical nurse education, construction of medical schools, veterans' care, and health care of the aged. We can expect greatly increased federal action in the whole health field.

Senator Kefauver plans to investigate health insurance, and he has barely scratched the surface of the drug issue. Senator Morse will hold hearings and subpoena contracts with radiologists and which may show nonprofit hospitals are allowing administrators and boards to be used by individuals for profit. —*Kenneth Williamson*, director, Washington Service Bureau, American Hospital Association.

What the Patient Expects

New Lessons from the Field of Motivational Research

We often don't think the patient has a very important role in the hospital because we have the image of active medical personnel and passive patients, who don't get in the way. Professionals prefer to deal impersonally with problems rather than with people, and because of the prestige of the medical profession, it is in a better position to get away with the passive image. The administrator shares least in the aura of prestige in the lay mind, and he knows the patient often erupts in nonpassive reactions.

In an obvious way he reacts to care and treatment with gripes and complaints and becomes a headache for the doctor, nurse and administrator. We seem to have these reactions mostly among the middle class who feel justified in having things their own way, comparing a hospital to a hotel or resort.

Griping is also very active in the low-income class, though they tend not to do it out loud, and think of the hospital as a jail rather than a hotel.

With most illnesses, intelligent, active participation is needed to get well. Ways to get this participation escape those who treat illness, because of their image that the patient is most cooperative when he is passive—hence little attention is given to establishing rapport.

It is easy for professionals to forget the lay person's image of his own body. There is a tendency to joke about it, forgetting how essential it is. Many lay people have a very vague conception of their own bodies, plus a lot of quaint notions. If these are not

Rising in the audience to question members of the panel on a point made in the discussion on What the Patient Expects of Our Hospitals is Leon Lewis, M.D., lecturer in medicine at California's Stanford University and noted writer on medical subjects. Dr. Lewis spoke on "The Hazards in Hospitalization" at the convention banquet.

Panelists, l. to r., Leonard Goudey, administrator, Proctor Community Hospital, Peoria; Lee Rainwater, Ph.D., associate director, Social Research, Inc.; Eleanor Lambertsen, R.N., director, division of nursing, AHA; and Hans Mauksch, Ph.D., director, department of patient care research, Presbyterian-St. Luke's Hospital; all of Chicago.

taken into account, there is a real chance of therapeutic failure.

In interviews in California with cardiac patients prior to their discharge, many did not know what was the matter with them; or if they knew it was a heart condition, they had no concept of the pump action and why stress should be avoided. They were given a new routine by rote, which is hard to follow without real understanding.

One of the biggest problems is that patients are not used to following a routine directed to future goals because they function on a day-to-day level. They have little confidence that what they do today will repay them in the future. It is necessary to form a close relationship for confidence, and here the hospital lets the patient down. Personnel are hurried and disinterested. If they would relate to the patient more fully, many gripes would disappear. Often the complaints about the high cost of hospitalization reflect low morale.—*Lee Rainwater, Ph.D.,* Social Research, Inc., Chicago.

Patient Wants to Cooperate; Too Often He Isn't Told How

A study we are currently conducting at our hospital supports Dr. Rainwater's comments. We often forget the patient's role—indeed, the fact that he plays two roles. He is the sick person, and he is the hospitalized person. The patient views himself as under strong pressure from everyone to be cooperative because of all these wonderful people who are helping him to get well. He has a hard time figuring out what he is supposed to do, especially since most things are done *to* him.

We have a lovely little rules book, but we really don't communicate very well. For instance, when a nurse comes in and tells a patient, "Ring the bell when you need me," the patient usually replies, "I hope I won't have to bother you because I know you are busy." What the patient really wants to know is: when *do* I ring the bell; what are the circumstances which classify as real need?

The patient constantly has the feeling he must be grateful, which is an encumbrance. I believe the patient who vehemently complains and the patient who gives glowing praise may be very close.

What happens to a patient lies with the professional. We need to understand the patient, but not necessarily go along with him. We do need authority, but it involves a price, which in this case has been the reduction of personal contact. From the patient's point of view, he has no competence to judge expertness except by external symbols. One of the most important symbols to the patient—it was mentioned in every interview—is a smile. — *Hans O. Mauksch, Ph.D.,* director, department of patient-care research, Presbyterian-St. Luke's Hospital, Chicago.

Cultural Differences Form Patient's Reaction to Hospital

Talking as a nurse, I accept the premise that the hospital is not a home, and that the patient has a limited capacity for understanding everything he might need to have to cooperate. The ability to understand is often further reduced by illness.

Most patients accept authority in a situation since it is for the good of everyone. The responsibility of the nurse is to explain *why* it is necessary. I am not concerned about the bell; most patients are ambulatory, and the problem now is to find the patient.

One of the things we stress in training nurses is that they find out from the patient and his family facts about any previous hospitalization. Nurses are trained to look at the patient in terms of age, sex and culture. Certainly most are aware of the differences encountered in the child and in the aged patient in fear of impending death, to whom every bodily function is of intense concern. Cultural differences are very important, and these must be stressed with the nurse. She must understand that the more volatile and emotional nationalities will give way to tears which may not mean anything other than a proper sympathy for the patient—who until his friends and relatives were due to visit was out of bed and frisky.—*Eleanor Lambertsen, R.N.,* director, division of nursing, American Hospital Association, Chicago.

Establishing an Inventory Control System of Capital Items

By Garrett Russell Graham

This is the second-prize winning article in Topics' 1960 editorial competition. Its author, Garrett R. Graham — who is now administrator, The Lynn Hospital, Lincoln Park, Mich. — brings a versatility of experience to his subject since he has been a hospital personnel director, training supervisor, a science and biology teacher, and a parttime salesman. At the time the article was written he was assistant administrator, Saginaw (Mich.) General Hospital.

When a projector, normally stored in the Saginaw (Mich.) General Hospital's main building, was missing, it was assumed by the house staff to be in the school of education. After several months, it was ascertained that the missing piece of equipment actually had been stolen. Investigation revealed that in the records of the business office there was no information whatsoever concerning the projector. The medical staff who used it most could not recall even the name of the manufacturer of this piece of equipment. It was decided after examining the camera floater insurance policy that the projector had been insured as a "45x70" radiant projector screen."

At about this same time, the hospital was attempting to qualify for fire and extended coverage insurance through the Factory Insurance Association. Besides the installation of an automatic sprinkler system and the establishment of hourly clocking of unoccupied areas during the night, there also had to be an accurate substantiation of the values of the buildings, capital equipment, and supplies. It became clear that an accurate system of inventory control including the recording of values and locations of equipment was necessary.

EXISTING CONDITIONS

For many years, the business office had maintained records of capital purchases. With a change of administration in 1948, depreciation schedules were begun. Apparently all purchases prior to 1948 were assumed to be completely depreciated. At this time, capital equipment was classified into the following seven accounts: furniture and equipment, engineering, nursing school, library, Andersen Hall (nurses' residence), apparatus and instruments, and Davis Home (interns' residence).

In 1956, the present administrator revised these accounts by eliminating the apparatus and instruments and furniture and equipment accounts, and increased the total number of 20. This was done in order to have closer accountability of equipment.

The business office records reflected only purchases and trade-ins, and their initial dollar value. Equipment either donated to the hospital or made by the maintenance shop was not included in the assets; worn-out equipment was removed from service with no credits to their asset accounts. (*See Appendix I: depreciation schedule.*) Records merely indicated the department for which the equipment had been purchased originally. Never had an attempt been made to inventory equipment and check this inventory with the business office records.

Depreciation schedules (*re. Appendix I*) for furniture and equipment were all at a rate of 10 percent over a 10-year period. No attempts had been made to utilize shorter schedules for such items as typewriters, as suggested in the American Hospital Association's "Uniform Chart of Accounts and Definitions for Hospitals." Another factor influencing the value of a piece of equipment that had not been considered was technical obsolescence. Some expensive apparatus from the laboratory or radiology had be-

come worthless with the introduction of a new process or improved equipment.

For the past five years the insurance records have indicated the contents of the hospital to be evaluated at $573,500. *(See Appendix II: schedule of fire insurance.)* The depreciation schedule of August 31, 1959, submitted by the hospital CPA indicated the sound insurable value of furniture and equipment to be $198,052.67. *(See Appendix III.)* The supplies inventory total at this date amounted to $118,723.42. *(See Appendix IV.)*

The insurance firm writing the major amount of fire and casualty insurance for the hospital had no records to substantiate the $573,500 value. It was felt that an inventory would supply records that could be used to determine realistic insurance coverage. The first thing that had to be done was to identify all the items of equipment.

Operating room instruments, stethoscopes, and other small items had been marked with a "vibratool." With this instrument locations and the hospital name were scratched into the metal. Such labeling survived autoclaving and helped personnel keep track of some equipment. However, it was not an adequate means of identification for most items as it could be used only on metal and could not be easily read from a distance. Large similar-appearing equipment such as beds had no distinguishing marks. It was felt that the inventory system should include clearly numbered tags placed on all equipment and accurate records describing the equipment and its location.

METHODOLOGY FOR THE INVENTORY

A. Establishing an Identification Tag System

It was decided that there would be several advantages in visibly labeling all capital equipment belonging to the hospital. Perhaps an obvious identification might be a deterrent factor to some types of stealing, such as the casual taking home of certain items by either employees, patients, or visitors; but from the standpoint of maintenance, two major advantages of this system seemed apparent. The initial reporting of a piece of equipment needing maintenance could be done easily using the tag serial number, and any maintenance records on repaired equipment could be accurately maintained, such as "casters were replaced on bed No. 2007 on December 21, 1961." The records of equipment sold or traded-in on new equipment would be maintained in an efficient manner with this positive means of identifying the capital items.

There were many requirements for the type of tag selected for this inventory program. It needed to be small, yet large enough to allow printing of the name of the hospital and a serial number that could be read easily from a distance of several feet. It needed to have an adhesive or some other method of attaching it to metal, wood, plastic, and glass, which would not require drilling into the surfaces. It had to be flexible enough to attach to a curved surface and, lastly, it needed to be such that it could easily be installed in a short length of time. A local office supply business was able to obtain a small aluminum tag which fitted all these qualifications. *(See Appendix V.)*

The majority of tags were attached to the equipment by the part-time employment of student nurses who utilized instruction sheets to maintain uniform locations. *(See Appendix VI.)* As items were tagged, the name of the item, location, and approximate condition were recorded.

B. Definition of Major Movable Equipment

For the most part, it was decided that check-list number four of "major movable equipment" in the American Hospital Association *Manual** would be used as a guide in determining if a piece of equipment would be inventoried and tagged. A list of exceptions can be found in Appendix VII. Tags would not adhere to rugs, venetian blinds, and anatomical charts, and items such as these were inventoried but listed separately in the records. Gas stoves, steam tables, ovens, autopsy tables, and other attached items were considered as fixed equipment to be evaluated as part of the building. At the request of our insurance carrier, mattresses were included in the expendable supplies inventory.

C. Establishing Necessary Records

Two basic records were established. The first consisted of a listing of all items by the serial number on the individual tag. These were typed on 8½ x 11" "no tear" pages and inserted in a loose-leaf binder. *(See Appendix VIII.)*

The second record consisted of an alphabetical listing of the items by department. It was decided to incorporate in this record the name, tag serial number, date of purchase of item if available, condition, and replaceable value. Black asterisks were placed in front of items that were considered to be uninsurable. Red asterisks denoted items insured under the camera floater policy. This record was maintained on one-eighth inch Flexoline strips in a desk stand with 50 page-type leaves. *(See Appendix IX.)* As a piece of equipment was transferred from one department to another, the record of that piece of equipment could also be changed easily. Before the records could be completed, the value of the capital equipment had to be appraised.

D. Method of Appraising Equipment Values

On the advice of one of our insurance carriers, several professional appraisal concerns were consulted. There seemed to be several advantages in a professional appraisal. The appraisal figures of a professional concern might be more readily accepted by an insurance adjuster in case of loss. A professional appraiser

(Continued on next page)

*American Hospital Association *Manual*, "Uniform Chart of Accounts and Definitions for Hospitals."

would know how to get the accurate values of equipment and should be more accurate than hospital personnel. The appraisers' experience should reduce the total time required for an appraisal. Another advantage suggested by one of the concerns was that an outsider might be able to suggest a fresh approach to a hospital problem and might arrive at more efficient methods of operation for the hospital.

However, it was decided to appraise the hospital equipment with hospital personnel. The biggest reason for this was the cost. It was felt that the estimated appraisal cost of $6,000 or $7,000 was too great an investment for the advantages that might be gained from a professional concern. Other reasons also guided this decision. It seemed reasonable to assume that people using the equipment were in a better position to determine its obsolescence than an outside concern. As the hospital had no inventory records to begin with, it was felt that whatever was established would be a fresh approach. The time and money spent in labeling the equipment and establishing records which had already been done in compiling the inventory would be duplicated by a professional concern in their appraisal. Furthermore, as it was decided to insure under our new factory insurance rating on a replacement cost basis, the difficulty of arriving at sound, insurable values was eliminated.

A sound insurable value is determined by subtracting the depreciation of a piece of equipment from its original cost. Many completely depreciated items, such as the beds purchased in 1922, have a replacement value nonetheless. This replacement value was determined to be the cost of purchasing a comparable item today, for example, $100 for a standard, manually cranked bed.

Many individuals helped to arrive at these figures. Besides the help given by the hospital purchasing agent, vendors, particularly those of hospital equipment, were helpful in establishing values of some of the pieces of equipment. Capital items purchased within the last 10 years usually could be found in the records. However, there was no recording of the large number of purchases necessary for the occupancy of the building addition in 1923. Most of the patient room furniture – beds, bedside stands, and dressers – purchased at this time is still in use. There is no way of knowing whether the appraisal values set by the hospital personnel were as accurate as if they had been made by professional appraisal concerns. However, the fact that they were accepted by the insurance association was sufficient reason to believe them to be reasonable.

PERPETUATING THE SYSTEM

Unless a continued control is maintained, the inventory records become a historic listing of the capital equipment during a particular month. The control must involve any additions or deletions or internal transfer of equipment. As the purchasing, accounting, and maintenance departments are all responsible to the assistant administrator, it will become one of his duties to maintain the records of the inventory system.

The purchasing department, upon receipt of a new item of capital equipment, will tag the item and forward to the assistant's office a copy of form I-3 with the pertinent information on it. (*See Appendix X.*) If an item is traded-in or sold, purchasing will forward a copy of the transaction and the identification tag from the item. When the maintenance department deems it necessary to remove a piece of equipment from service, the form will be made out with the reason for the removal of the equipment and the tag from the piece of equipment. Proper indication will be made on the inventory records by drawing a red line through the item on the 8½x11" page with the reason for the deletion from the records, and the Flexoline strip will be removed and destroyed. The inventory serial tag will also be destroyed.

On an annual basis or at the time of renewal of the insurance premium, the evaluations of the present capital equipment will be retotaled as our part of the insurance contract.

COST OF ESTABLISHING THE SYSTEM

It was impossible to determine the actual cost of establishing the inventory system. The cost expenditures by the hospital have been classified into material purchases and direct labor costs.

The following items were purchased to establish records:

1. 10,000 tags	$600.00
2. Flexoline desk stand with 50 leaves	171.00
3. 8½x11" binder with "no tear" fillers	2.35
4. 5x8" I-3 forms (hospital printed)	1.50
TOTAL	$774.85

Of the 10,000 tags, almost 6,000 were used initially. The remaining 4,000 will be used as new equipment is purchased. When the addition to the hospital is completed next year, there will be many new items.

The Flexoline stand, expanded to 50 leaves, has a capacity of 7,200 one-eighth inch strips. A second stand will be added as the need arises.

Part time clerical help was hired at the rate of $1 per hour. Two student nurses and one college student were paid a total of $136 to attach the tags. It was estimated that 208 hours of clerical time at $1.50 an hour were used in establishing records. As this work was done by the assistant administrator's secretary, along with regular duties, this is necessarily an estimate. The purchasing agent's time in arriving at replacement costs amounted to about six hours or $15.90.

Many hours of labor were volunteered for the project. It was impossible to set a dollar value on this help. Several local furniture dealers appraised the equipment in Andersen Hall, the student nurses' residence. Salesmen for many hospital supply houses helped in determining replacement costs of numerous items. The tagging in the x-ray department and laboratory was done by each department.

RESULTS OF THE INVENTORY SYSTEM

The cost of establishment of accurate capital records through this project will be almost equaled in five years by insurance savings produced by utilizing these records. Formerly, the hospital had insured contents at a value of $573,500. The records indicate the actual insurable value on a replacement basis to be $248,748. Insuring at the lower value saved a five-year premium of $865.

Several lost or unused items were located and disposed of. An optical brombach perimeter purchased in 1955 for $265 was found in a storage room corner partially uncrated. As this had never been used a local dealer traded a used otology chair for it. An old x-ray transformer in the same room was uncovered and sold. A 10-year-old transcriber was located in a basement room and traded-in for a new one. Nine new unused intravenous standards, collecting dust in a basement room, were put into service.

Along with the process of tagging equipment, it was decided to throw out all that was unusable or obsolete. Tunnels and storage rooms were filled with old dressers, doors, bath tubs, broken wheel chairs,

(Continued on next page)

Appendix I

Depreciation Schedule Excerpt
August 31, 1959

(YEO & YEO, CPA)

			ASSETS				DEPRECIATION			
	Rate	Acquired	Balance 9/1/58	Additions	Retirements	Balance 8/31/59	Balance 9/1/58	Additions	Charges	Balance 8/31/59
Buildings										
Davis Home	2%	1/1/46	$ 28,000.00			$ 28,000.00	$ 7,668.34	$ 560.00		$ 8,228.34
		1955	175.00			175.00	12.27	3.50		15.77
		1957	292.00			292.00	5.86	5.84		11.70
	3%	1958	4,750.17			4,750.17	71.25	142.50		213.75
			$ 33,217.17	$ —0—	$ —0—	$ 33,217.17	$ 7,757.72	$ 711.84	$ —0—	$ 8,469.56
TOTAL BUILDINGS			$1,459,328.94	$6,796.21	$ —0—	$1,466,125.15	$343,842.24	$ 29,927.70	$ —0—	$373,769.94
Furniture & Equipment	**10%**									
Furniture & Equip.										
		1948 & Prior	$ 126,931.70			$ 126,931.70	$126,931.70	$	$	$126,931.70
		1949	3,054.11			3,054.11	2,825.05	229.06		3,054.11
		1950	6,043.60			6,043.60	5,137.06	604.36		5,741.42
		1951	2,664.75			2,664.75	1,998.58	266.48		2,265.06
		1952	61,152.60		$2,724.60	58,428.00	38,519.36	5,842.80	1,716.20	42,645.96
		1953	21,376.75			21,376.75	11,757.23	2,137.68		13,894.91
		1954	27,871.93			27,871.93	12,542.36	2,787.19		15,329.55
		1955	5,911.82			5,911.82	2,069.13	591.18		2,660.31
			$ 255,007.26	$ —0—	$2,724.60	$ 252,282.66	$201,780.47	$ 12,458.75	$1,716.20	$212,523.02
Administration		1956	$ 18,683.20			$ 18,683.20	$ 4,670.80	$ 1,868.32		$ 6,539.12
		1957	674.30			674.30	101.15	67.43		168.58
		1958	12,588.47			12,588.47	629.42	1,258.85		1,888.27
		1959		7,552.94		7,552.94		418.67		418.67
			$ 31,945.97	$7,552.94	$ —0—	$ 39,498.91	$ 5,401.37	$ 3,613.27	$ —0—	$ 9,014.64
Dietary		1956	$ 4,332.20			$ 4,332.20	$ 1,083.05	$ 433.22		1,516.27
		1957	4,484.69			4,484.69	672.71	448.47		1,121.18
		1958	708.72			708.72	35.44	70.87		106.31
		1959		1,312.25		1,312.25		65.61		65.61
			$ 9,525.61	$1,312.25	$ —0—	$ 10,837.86	$ 1,791.20	$ 1,018.17	$ —0—	$ 2,809.37
Engineering										
		1948 & Prior	$ 68,247.74			$ 68,247.74	$ 68,247.74			$ 68,247.74
		1949	352.00			352.00	325.60	26.40		352.00
		1950	133.51			133.51	128.01	13.35		141.36
		1951	799.32			799.32	519.55	79.93		599.48
		1953	1,334.24			1,334.24	733.82	133.42		867.24
		1954	7,586.09			7,586.09	3,413.75	758.61		4,172.36
		1956	3,176.12			3,176.12	794.03	317.61		1,111.64
		1957	934.11			934.11	140.12	93.41		233.53
		1958	67.50			67.50	3.38	6.75		10.13
		1959		71.25		71.25		3.56		3.56
			$ 82,630.63	$ 71.25	$ —0—	$ 82,701.88	$ 74,306.00	$ 1,433.04	$ —0—	$ 75,739.04

Appendix II

Schedule of Fire Insurance

Item No.	*Amount of Insurance*		
	BUILDING	CONTENTS	
1.	$1,250,000	$350,000	On the six-story, fireproof and brick main hospital at 1431-71 North Harrison St.
2.	105,000	70,000	On the fireproof power house on 2nd rear of 1447 No. Harrison St., including brick stack.
3.	30,000	7,500	On the two-story brick approved roof laundry annex and maintenance shop at rear of 1447 No. Harrison.
4.	22,000	110,000	On the one-story brick storage building at rear of 1449 No. Harrison St.
5.	80,000	6,000	On the three-story brick composition roof, interns' home (Davis Home) at 1449 No. Harrison Street.
6.	485,000	30,000	On the four-story fireproof nurses' home (Andersen Hall) at 1202 No. Bond Street.
	$1,972,000	$573,500	

Appendix III

Saginaw General Hospital
Furniture & Equipment
August 31, 1959

Furniture & equipment	$ 39,759.64
Administration	30,484.27
Dietary	8,028.49
Engineering	6,962.84
Maintenance	850.80
Housekeeping	2,587.85
Davis Home	843.10
Laundry	9,343.88
Professional care	21,737.81
Medical records & library	2,790.71
Laboratory	7,501.15
Physical medicine	44.24
X-ray	22,322.30
Nursing school	871.85
Library	870.50
EEG	1,010.26
Cleft palate clinic	1,100.00
Pharmacy	3,636.76
Andersen Hall	1,119.27
Interns' residence	167.20
Apparatus & instruments	36,019.75
TOTAL FURNITURE & EQUIPMENT	$198,052.67

wire, pipe, and a multitude of items. Of this assortment, some items were sold to employees for a total of $50. The amount realized from scrap metal sales was $290.

After the cluttered areas were cleaned, much usable storage space was available. About 2,000 square feet of impassable area in the penthouse was cleared. A basement room, now freed of old contents, was painted and set up as a men's locker room. During this clean-up process, it was observed that a regular pest control service was needed for the entire hospital and grounds. The results of this new contracted service have justified its expense.

CONCLUSIONS

It would appear that this inventory control system was desirable for several reasons:

1. The hospital accurately substantiated replacement values for insurance loss and determined necessary insurance coverage.

2. The administration became cognizant of all the equipment owned by the hospital and its normal location.

(*Continued on page* 52)

Appendix IV

Inventory Summary
August 31, 1959

Supplies

Acct. #	*Storeroom*	*Adjusted physical inventory*
140	Administrative	$ 11,708.56
141	Dietary	12,079.65
142	Maintenance	1,321.79
143	Housekeeping	16,514.26
144	Laboratory	5,381.04
145	Laundry	1,379.58
146	Nursing school	
147	Professional care	34,062.56
148	Pharmacy	26,474.08
149	X-ray	
	SUB TOTAL	$108,921.52
	Producing	
141	Dietary	2,180.36
142	Maintenance	4,053.99
146	Nursing school	
147	Professional care	957.58
148	Pharmacy	309.23
149	X-ray	2,300.74
	SUB TOTAL	$ 9,801.90
	TOTAL	$118,723.42

Appendix V

Sample Tag

Appendix VI

Tagging Instruction Sheet

Please read the instructions on the cans of activating solution. Brush the solution on the back of the tag. An excess of activator is better than not enough. If you spill on the terrazzo floor it will rapidly evaporate. Try not to spill on asphalt tile.

In general, tag items near brand names or labels. Tags should be centered and parallel to horizontal surfaces or equipment labels. If the tag is to go on a curved surface, fit the tag before applying the activating solution.

Below are sketched outlines of some items. Attempt to be uniform in locations of the tags.

Appendix VII

Major Movable Equipment Exceptions

Below are listed exceptions to the check-list #4 of major movable equipment beginning on p. 163 of the "Uniform Charts of Accounts and Definitions for Hospitals":

Apparatus—bone surgery
Autopsy tables
Baths—continuous, arm leg, etc.
Bed pan racks
Blackboards
Blanket dryers
Bulletin boards
Bleach tanks
Cabinets, paper towel
Charts, anatomical
Chemical hoods
Clocks
Curtain stretchers
Dishwashers
Distilling apparatus
Drills—bone
Forges
Griddles
Grinder
Ice-cube making equipment
Lamps—bed
Lockers, wood
Mats, nonskid
Mattresses—delivery table
Oven—baking, roasting
Pictures
Racks—broom
Racks—dish & tray
Rugs
Saws—hand
Steamer, vegetable
Stock pots
Stop watches
Stoves
Tables—hot food, scraping, steam
Tool threading set
Venetian blinds
Ventilating fans
Water purifiers & softeners
Window screens
Windows, storm

(*Continued from page 50*)

3. The awareness of the condition of the building and its contents led to the establishment of routine inspections by the housekeeping and maintenance departments.

4. Needed storage space was reclaimed.

5. Obsolete and unusable items, potential fire hazards, were removed from the penthouse (attic) and the basement tunnels.

6. It was apparent that employee cooperation and interest was high in this project. It seemed to raise their morale to know that the administration was aware of their work areas and the condition of their equipment.

7. Equipment is kept in better condition now because of the ease in reporting needed repairs by serial number and location.

BIBLIOGRAPHY

1. American Hospital Association, "Uniform Chart of Accounts and Definition for Hospitals."

2. Barbatelli, Ettore, "Should Hospitals Maintain Property Accounts?" *Hospital Accounting* 13:10, October, 1959.

Appendix VIII

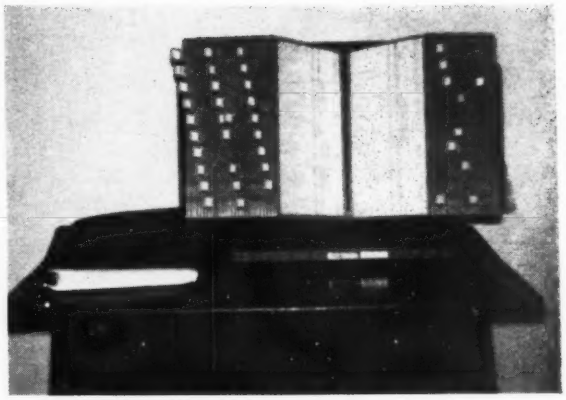
Inventory

5278. Basin stand, stainless steel square Operating Room
5279. Hordebrink Kinet-O-Meter; ser. # K22812 Ohio Chemical Co. ..... Operating Room
5280. Kick bucket ..... Operating Room
5281. Basin stand ..... Operating Room
5282. Kick bucket, stainless steel ..... Operating Room
5283. Curved table, instrument ..... Operating Room
5284. Basin stand ..... Operating Room
5285. Foot stool, painted metal 12x18" top ..... Operating Room
5286. Basin stand, painted ..... Operating Room
5287. Kick bucket, stainless steel ..... Operating Room
5288. Basin stand, square ..... Operating Room
5289. Mayo painted stand with por. top 12½x19" ..... Operating Room
5290. Foot stool, stainless steel with painted legs 14x10" top ..... Operating Room
5291. Arm board ..... Operating Room
5292. Crescent table ..... Operating Room
5293. Kick bucket, stainless steel ..... Operating Room
5294. Basin stand, stainless steel ..... Operating Room
5295. Table, painted 24x48 ..... Operating Room
5296. Table, stainless steel 24x48 with guard rails ..... Operating Room
5297. Frigidaire ..... Operating Room
5298. Stool, square painted ..... Operating Room
5299. Laundry hamper with bag ..... Operating Room
5300. Microtome with CO_2 freezing attachment ..... Operating Room
5301. Table, large instrument 48x24, stainless steel top removable ..... Operating Room
5302. Cart, lakeside #311 ..... Operating Room

Appendix IX

Records Illustrations

Fig. 1



Visible record stand and loose-leaf binder.

Fig. 2

Arrow Wheelchair(Red); Ser.#46398	5005	Emer.Rm.		$90.00
5 Drawer File(Green) (AM 760)	2527	Admin.Off.	1944	$128.00
Multilith (1250) (Rebuilt)	168	Purch.Dept.	1944	$1900.00

Inserts for above stand.

These strips are wood, covered with paper. They are available in several colors. After typing they can be easily separated to allow alphabetical insertion in the proper leaf. Once separated it is almost impossible to roll only one or two strips back into the typwriter. However, changes can be made with pen or pencil.

Appendix X

Capital Equipment Inventory Control

CAPITAL EQUIPMENT INVENTORY CONTROL

DATE _____ ITEM _____

☐ Item Purchased — Purchase Price _____ Vender _____
Department _____ Tag # _____
Brand Name _____
Model No. _____ Serial No. _____

☐ Item Sold — Sold for $ _____ To _____
Approximate Original Purchase Price $ _____

☐ Item Traded In — Traded for _____ Vender _____
Previous Location _____ Tag # _____

☐ Item Destroyed — Assigned Tag # _____ (which I am attaching)
Reason for destroying _____

SGH I-3

A review of what's being written on . . .

The Aging Hospital: Problems and Remedies

By Sigmund L. Friedman, M.D.*

Obsolescent hospitals and obsolescent hospital facilities are relatively new additions to the many problems with which administrators and their trustees must struggle. And since hospital obsolescence is in large part due to advances in scientific and medical technology, the problem is inevitable – and will continue.

In fact, the situation is of truly major dimensions, not only to individual institutions but to the entire country: the United States Public Health Service has estimated that the national cost of needed modernization and replacement is nearly four times the current level of annual construction expenditures in the health facilities field. This estimate amounted to $3.6 billion and was arrived at after a survey had been done of hospitals (exclusive of tuberculosis institutions) in the 25 metropolitan areas with more than 2,500 general hospital beds, and in 32 smaller metropolitan areas. Projections were made from these 57 sample cities throughout the country and from state-owned mental institutions in 30 states.

On a smaller scale, the Hospital Council of Greater New York estimated in 1956 that the 66 member hospitals (all voluntary) of New York's United Hospital Fund needed about $180 million to place their plants in reasonably satisfactory condition, with no expansion in the number of beds or scope of services. This figure was arrived at after completion of on-the-spot surveys of the hospitals by a single team of hospital consultants and architects using uniform, written criteria.

Estimating the cost of modernization including replacement where necessary is, however, only one way of estimating the magnitude of the problem. There are other ways. One can, for example, determine the number of ancillary services (e.g., surgical suites or laboratories) that are obsolescent. Or one can count the number of "unacceptable" beds. This latter is done regularly by the U. S. Public Health Service. As of January 1, 1959, the division of hospital and medical facilities of the Department of Health, Education, and Welfare reported that there were 1,568,028 beds of all categories in the country, excluding those in federal facilities. Of these, 281,539 were classified by the state Hill-Burton agencies as "not-acceptable" on the basis of fire and health hazards. The distribution of these non-acceptable beds varied considerably of course: for example, only 10 percent of all beds in general hospitals were non-acceptable, in contrast to 45 percent in nursing homes. The proportion of non-acceptable beds varied greatly from state to state: Rhode Island reported only 12 hospital beds out of a total of 7,892 as non-acceptable; Maryland, 285 out of 21,487; Idaho, 1,179 out of 3,676.

Clearly, modernization and replacement of a large proportion of existing plants constitute one of our most urgent hospital needs, particularly in urban communities. And in older cities it is probably the most urgent need.

But to the individual hospital administrator the questions of greatest urgency are not those relating to the magnitude of the problem, but those relating to his own institution: Is the obsolescence in my hospital significant? Must we do something about it *now*, or can we wait another five years? Can we modernize our present buildings, or *must* we undertake a major program of new construction?

Most hospitals "began small" – frequently in an old mansion, frequently in a small building designed with thought only of immediate needs. As demands increased, wings were added, each meant to satisfy another immediate need, but with little, if any, regard to future expansion. Expansion, however, became necessary, and so new pavilions were added, sometimes by jumping across streets. The hospitals built in this way (and there have been many) have become less and less manageable, and so more and more costly to operate.

Some hospitals have found their plants so inefficient and costly that they have been forced to abandon them completely and build anew. Others have found that by partial demolition, re-planning, and consoli-

(*Continued on next page*)

*Staff consultant, Hospital Council of Greater New York; professorial lecturer (hospital planning), School of Architecture, Pratt Institute, New York City.

dation they could develop a modern, well-integrated plant.

A striking example of the hospital that has grown like Topsy is described in last October's issue of *Architectural Forum*. A municipal general hospital in a New England City with a population of 200,000 is located in the heart of the downtown section of the city. Until its modernization, it consisted of 22 scattered buildings, 19 of which dated before 1905, one dating as far back as 1882. The only fireproof buildings were a large nurses' residence built in 1929 and a central administration and patients' building finished in 1938. Of 436 beds, 293 were considered "non-acceptable" by the state. The outpatient department was located a block away from the diagnostic and treatment facilities of the main hospital, so that there were several duplicate facilities (x-ray, laboratory, pharmacy, and records). The surgical and delivery suites were isolated from their patients; the main laboratory was over 450 feet from the central building; pediatrics was in a non-fireproof building.

In the modernization program, the sound older buildings are being retained, and the unsound ones replaced by a new central building consolidating most of the departments.

Assuming there is a need for the hospital beds in their present location, one of the first steps is to decide which buildings must be replaced – a step that must be taken whether the hospital is a large municipal institution, a medium-sized voluntary hospital, or a small proprietary.

Certainly, a hospital building must be replaced if it constitutes an irremediable hazard to patients and personnel. Probably the most important such hazard is fire: there can be no argument with the position that all non-fire-resistant patient-buildings should be replaced, unless they can be made fire-resistive (and some can, usually at high cost).

"This certainly points up the value of safety glasses."

The standards developed by the New York state joint hospital survey and planning commission (now the division of hospital review and planning in the State Department of Health) state that "in evaluating the suitability of hospital plants and related facilities for long-range planning, criteria are applied which assure, or exceed a two-hour fire rating (structures capable of controlling a fire for at least two hours, thus allowing sufficient time for an orderly, safe evacuation of patients). Although sprinkler systems, standpipes, and fire-detection devices contribute to the safety of a building, their use in a non-fire-resistive structure does not render it fire-resistive."

Furthermore, "To be fire-resistive, a structure should include protective features, such as enclosed stair wells or fire towers, fire doors, fire barriers and smoke barriers and should be constructed in one of the following ways:

"1. Reinforced concrete framing with interior partitions of noncombustible materials.

"2. Structural steel framing properly fire-protected, with floor panels and interior partitions of noncombustible materials.

"3. Exterior masonry, load-bearing walls with interior, lightweight, open-web, steel bar floor joists properly fire-protected; all interior columns and beams fire-protected; and with floor panels and interior partitions of noncombustible materials."

Hospital administrators who have any reason to be concerned about the fire-resistive nature of their buildings should consult their architects, the inspection reports of their local fire marshal, the National Board of Fire Underwriters, or governmental institutional inspectors (in some states these are attached to the state department of social welfare or other hospital licensing body).

There are, of course, other situations in which the most serious consideration must be given to the replacement of a patient-building; for example, where the buildings were not originally designed for hospital use and cannot be made suitable for such use; where the buildings have either so deteriorated or have so many major defects that they cannot *economically* be modernized; or where the buildings are so narrow that they cannot accommodate properly the modern highly equipped departments, such as surgery, x-ray and laboratory.

These reasons for replacement of a building seem obvious, yet many a hospital has become involved in a modernization program only to end by spending as much as it would have on a totally new plant. New x-ray departments, modernization of surgical and delivery suites, new plumbing, ventilating, and electrical systems, new elevators and thorough overhaul of the steam generator and distributing systems are not cheap. If a hospital knows that it needs these, it must ask itself: "what else?" Only when it has answered this question, should the hospital begin its consideration of what to do.

[*Dr. Friedman will continue this subject in another issue.*]

When hospitals of comparable size use widely varying amounts of the same materials, the inefficiency may be traced to the middle management group - - -

Middle Management— Key to Effective Cost Control

By Arthur H. Dilly, B.A., M.S.A., and Ivan Belknap, Ph.D.*

The increasing size, cost, and complexity of hospitals today require more delegation of direct operational responsibility to middle management. For the larger hospitals and hospital systems, it is no longer enough to have a capable administrator. Good hospital administration and good patient care begin with a good administrator *plus* good department heads and supervisors.

The administrator who does not hire and keep the best middle management personnel may find himself without adequate performance from his organization — and find it out too late. Those who minimize the problem of selection of good middle management personnel, or who try blindly to economize on middle management salaries, sometimes argue that efficient cost accounting or other institutional audit technics are sufficient controls in themselves for the executive. The reasoning is that with a proper system of control the organization can function efficiently, regardless of middle management quality, provided the executive uses his management system and its statistics properly.

Reliance on a system of indices rather than on well-trained and adequately motivated middle management is essentially illogical. It is illogical because the principle of delegation requires by definition the assignment of important functions to midde management. These functions, again by definition, require decisions at the level to which they are delegated. Important decisions can never be safely delegated by the executive to anyone lacking full competence in the delegated area.

Also, the reliance on systems rather than men contradicts our more recent industrial and business research findings. When the system is used partly to "check up" on the mediocre department head or supervisor he is apt to find ways to use the system to protect himself, rather than to further the ends of the organization. After that, there is little chance to develop the spontaneous energy and support for the organization which all modern research shows comes from selecting the best and expecting the best.

All management systems rest in the last analysis on men. In the large hospital, middle management will inevitaby determine whether the work will be done efficiently and patient care improved. If middle management is properly selected for delegation and properly treated, the cost and other audit figures will provide the executive with an accurate picture of his organization. If middle management is mediocre or ill-treated, any management audit system may be used or allowed by middle management to reflect a false or confusing state of affairs and the quality of patient care will suffer.

Some case illustrations of the misuse of good management audit systems by middle management have occurred in our review for the H. E. Butt Foundation of the operations of several large institutions of comparable size and function. These institutions are a part of the Texas state hospital system under the administration of the Texas State Board for Hospitals and Special Schools. The Butt Foundation, under the direction of one board member contributed a series of administrative case studies designed to evaluate aspects of the operational program of this hospital system. The primary purpose of the evaluation was to determine areas of unnecessary administrative costs so that the resulting savings could be applied to direct patient care.

The state hospital system in Texas is integrated. Integration is secured through such means as functional area directors operating from a central office, a master menu and centralized purchasing procedure, a centralized audit and accounting system, and institutional operational review by central office line directors. It is the intention of the board that insofar as possible administrative procedures be alike in all institutions within the system.

The supervisors and department heads involved in these operations were selected at numerous points without careful screening for competence. Their salaries were about 20 percent below those of their

(Continued on next page)

*Mr. Dilly is consultant in institutional management to the H. E. Butt Foundation. Dr. Belknap is director, The University of Texas Hospital-Community Project; professor, department of sociology at the university; and research consultant to the H. E. Butt Foundation and other foundations in the health and welfare field.

occupational equivalents outside the hospital field. Several management surveys of these hospital operations, however, had resulted in the setting up of excellent systems of institutional cost accounting and functional auditing, which, on paper, conformed to the best standard in the hospital field.

Our preliminary analysis showed that all the institutions reflected comparable unit cost figures in their official business and financial reports. However, in many cases when inquiry was pushed into the fractional areas which make up the standard unit cost, large discrepancies in the consumption or purchase of various supplies were evident. All of these discrepancies were of an order which could and should have called for action by an alert middle management, and which in their aggregate would have represented a saving in money and time, with an improvement in general patient care.

To illustrate this point, we have selected housekeeping operations, certain aspects of purchasing and food service, and laundry cost control.

Food Service Operations

Most integrated hospital systems, especially at the state level, have found it beneficial from both the nutritional and economic viewpoints to set up master menu systems. This decision is usually dictated by the shortage of trained dietary personnel and the advantages of centralized purchasing. Purchasing methods and delivery sources are such that regional variation does not affect cost differences. In spite of two built-in safeguards to insure uniform meals – the master menu, and a reported comparable raw food cost per patient day – it is possible for institutions comparable in size and function to vary so greatly in their actual purchase of certain items that the nutritional adequacy of the meals might be questioned. This is illustrated in the following purchases:

Table 1. Purchases of Vegetables, Meats and Eggs in Four Comparable Institutions

Product	*Hospital*			
	A	B	C	D
Celery, pounds	360	6,690	3,570	6,180
Potatoes, 100 lb. sacks	90	241	205	345
Carrots, 50 lb. sacks	306	221	106	178
Meat (boneless chuck) lbs.	2,000	6,540	7,000	11,295
Poultry (all types) lbs.	3,460	6,027	7,734	6,498
Eggs, cases	527	357	255	430
Raw Food Cost Per Day	.49	.55	.53	.57

It seemed strange, if the policy-formulating body had adopted the standard menu system, that such variations in purchasing should have gone unchecked. Only middle management was in the position to develop and oversee performance and to take corrective action. The top management of the integrated system knew and could know only that the master menu was theoretically nutritionally adequate, and that the several institutions reported comparable raw food costs. They could not be expected to know more. Middle management had to be depended upon to formulate the master menu, order the food supplies, and enforce the approved menu plan. Without conscientious middle management personnel the standardized menu was rendered relatively meaningless in spite of controls.

Aside from the actual purchasing, preparation, and serving of food, food service operations have other aspects not reflected in the standard unit cost indices. This means that the administrator must rely on his middle management representative for the control of these activities. For example, a study of the machine dishwashing compound used annually by three institutions of comparable size and function revealed an interesting variation in Table 2:

Table 2. Variations in Use of Machine Dishwashing Compound

Institution	*Machine Dishwashing Compound*
Hospital A	69,625 lbs.
Hospital B	23,875 lbs.
Hospital C	21,490 lbs.

On-the-spot inspection of the dishwashing machines in Hospital A revealed that the soap dispensers were wired open, and that literally, money was being washed down the drain. It would seem to be unforgivable for a department supervisor to permit such a wasteful practice to begin, much less continue, within the sphere of his administrative responsibility. No workable management audit system can develop controls for all such details as these. A competent supervisor is the only effective answer.

Housekeeping Operations

Hospital housekeeping activities have not yet been refined to the point where formal cost measures can be applied. Instead it has become customary to compare the actual usage of common supplies among institutions of comparable size and function. Middle management has a definite responsibility to establish norms of usage to replace the cost-accounting indexes found in other hospital departments. However, in our studies no definite usage patterns were evident. Table 3 shows a typical example of failure to establish norms.

Table 3. Variations in Soap Usage between Four Institutions

Product	*Hospital*			
	A	B	C	D
Laundry bar soap, ea.	21,321	7,812	19,642	288
Soap powder, box	46,205	13,869	23,306	none
Toilet soap, bar	63,721	38,791	39,956	32,341

It is obvious from the above that such vast differences in the annual consumption of these commonly used supplies would bear some investigation. Certainly all of these institutions are performing the routine housekeeping-cleaning functions; however, the technics of usage and inventory control clearly require analysis and decision by middle management personnel. And such analysis and decision cannot be enforced by an audit system. It must come from the department heads and supervisors.

Laundry Cost Control

The standard unit cost figure in laundry management is another example of an audit figure that may

not reflect the efficiency of laundry operations. Primarily this is because such a high percentage of the unit cost is made up of labor cost. Great inequities in the usage of relatively inexpensive laundry supplies may easily go unnoticed without middle management alertness. For example, two institutions (Table 4) using the same municipal water source and comparable laundry supplies showed the following average usage for a six months period:

Table 4. Laundry Cost and Usage in Two Institutions

	Laundry Cost	*Usage per 100 Lbs. of Laundry*		
Institution	*Per Lb.*	*Soap*	*Alkali*	*Sour*
A	.03	16 oz.	6.6 oz.	.76 oz.
B	.05	10 oz.	8.3 oz.	2.0 oz.

The variation in laundry cost was always thought to be related to greater laundry volume and the use of more patient labor at Institution A. A detailed study of the unit cost figure again revealed a great need for middle management decisions on washroom formula and practice. Both of these institutions had comparable washing formulas worked out and evaluated by laundry experts, and posted near the washing machines. It was the responsibility of operational middle management to see that effective controls in the use of laundry supplies were instituted and followed. However, it is obvious in the case of Institution A that middle management control of the washroom formula and practice was so ineffective as to permit an excessive use of the soap product. Here again middle management, in spite of the availability of a control mechanism in the accepted washing formula, did not fulfill its responsibility.

The illustrations cited serve to point out a problem area of ever-increasing importance in modern hospital administration. It is impossible to reflect completely detailed hospital operations in the standard cost-accounting or use formulas generally accepted in institutional management. In the last analysis even the best control system depends entirely on the competence and responsibility of middle management. Control systems cannot be substituted for these human qualities as size, complexity, and costs increase in the modern hospital.

Godfrey Says 'Mulligan Stew' Campaigns Threaten All Health Organizations

The American people must learn how to be discerning about the dozens of health groups seeking their dollars. Organized appeals of all kinds top 4,000. The result is a disgraceful watering down of all private research and charity money and can lead only to a public distaste for all such organizations.

A screening organization is rapidly becoming more and more urgent for the simple reason that the worthwhile societies are going to be – if they are not already – damned by the worst of the new pack. Some of these, which spend more than half their incomes in expenses, are driving up the costs of all others to a point which makes them equally suspect to the contributor. You do not need to look far today to see the waves of public opinion building up against the medical profession, hospitals, and volunteer health agencies.

We live in an age in which private groups must act to police themselves, in time and with regard for the public interest, or face either extinction or control. They must use communication to preserve the good which the society has accomplished.

In all of the communications areas – press, radio, television, and the advertising in these media – there is a crying requirement for more cooperation than the medical profession is at times willing to extend. Personally, I would like to see more responsible medical news included in our radio and TV news reports. The individual broadcasters can conduct more and better interviews with research scientists. If we can make idols out of kids with off-beat voices, unstrung guitars, and undisciplined derrieres, we should be able to project the dramas of science in terms the layman can assimilate.

Your first enemy is public apathy, brought about partially by bouillabaisse campaigns to which the public has been conditioned. These mulligan stew campaigns are an outgrowth of the excesses of charitable groups; their very existence and effort to add the health agencies to the stew are clear signs that the health societies must take the lead in cleaning their own kettles.

Your second problem lies in obtaining the cooperation of leaders in business, industry, and the trades. Many executives are frank in saying the united campaigns have an economic appeal to them. It simplifies their own corporate giving, their employee relations, their bookkeeping, and the "down time" resulting from multiple in-plant campaigns.

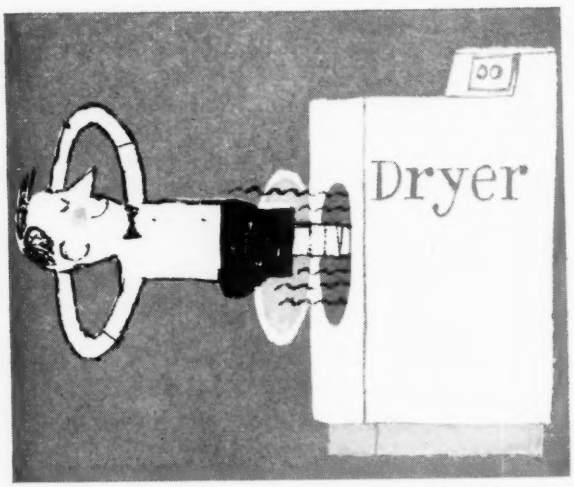
One answer might be to conduct two annual campaigns in business and industry: one in the fall for the united local charities and one in spring for the major voluntary health agencies. You need to convince them of the validity in preserving your identity. You need to present them with economic reasons for an investment in medical research – such as, saving of lives; greater productivity due to better employee health; a lessening in the rate of increase in their medical costs.

There is another potent argument for the businessman: the only alternative if private medical research cannot support itself would be for government to take over. And if private medical research is choked out, then all medicine – and for that matter all business eventually – is headed into the all-encompassing arms of Big Government.

I suggest that the U.S. Chamber of Commerce, the National Association of Manufacturers, and the National Industrial Relations Conference Board review the problem of the voluntary health agencies on the basis of the Rockefeller report, and then swing their full weight behind those agencies whose worthwhile contributions have been demonstrated.

I suggest also that the President summon a White House Conference to clarify the presently obscured and muddled situation.–*Arthur Godfrey,* speaking at the recent meeting of the American Cancer Society, New York City.

4 reasons to try **TENSOR** elastic bandages



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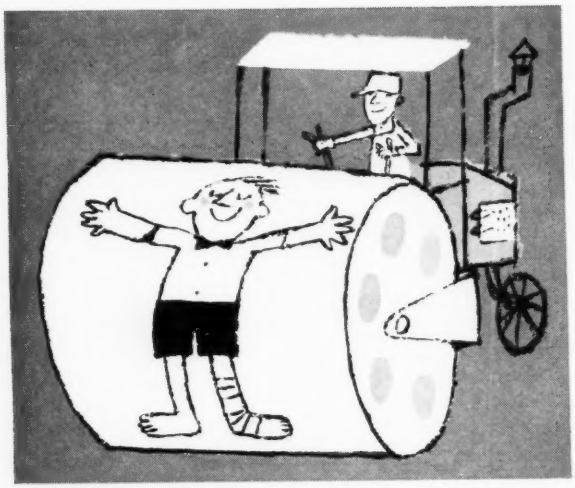

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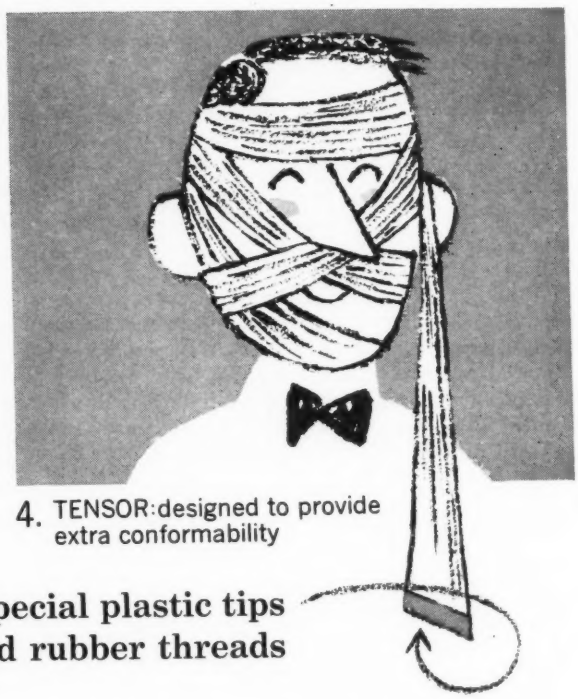

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For further information see postcard opposite page 138.

Consultant's Corner

By John G. Steinle

Q. We are considering closing our laundry and going to a commercial linen service. Do you have any suggestions?

A. The size of the hospital will substantially influence the work load which in turn affects the feasibility of use of a commercial linen service.

It has been my experience that linen services are usually more expensive than the operation of a laundry. Each situation requires a very careful cost analysis of all possible systems: the hospital doing its own laundry, the purchase of laundry service from a commercial laundry, and linen rental service. This analysis must include all costs.

I would however, like to take this opportunity to point out some problems in both linen rental and the use of a commercial laundry:

– Both systems require hospital personnel to check linens in and out.

– Unless weekend service is provided, (an unusual situation) the rental service must assure an adequate supply for the weekend; the commercial laundry must assure completion of laundry in time for the weekend. Most problems with linen services occur on weekends.

– In computing costs, don't be misled by quotations on flat work only. Most commercial laundries and linen service companies make their largest margin of profit on finished work. While the charges for flat work may approximate the costs of the hospital, the finished work is usually very high.

In a 160 bed hospital that initially had a linen service, an annual saving of about $110 per bed was made by converting to a commercial laundry. Another $60 per bed per year was saved when the hospital constructed and operated its own laundry. Amortization of capital expenditures were included in determination of costs of the hospital's laundry operation.

Q. We are planning the expansion of our present 180 beds to 325 beds. A new operating suite for the entire hospital is to be included. How many operating rooms should be provided and do you have any plans or reprints for an operating suite in a hospital of 300-350 beds.

A. There is a substantial variation from hospital to hospital in the proportion of surgical patients to total patients. There is also a variation in the average time per operation. However, in a hospital of this size each operating room is used on the average of slightly more than one and one half times per day. Assuming that the present proportion of surgical admissions will remain the same after the expansion, the following formula can be used: $x = \frac{.7n \times y}{b}$

x – number of operating rooms required;
n – total number of beds in the hospital;
y – percent of average annual admissions that are surgical;
b – average day stay of surgical patients;
.7 – represents a constant which includes: (a) adjustment for occupancy at a normal rate of 80 percent; (b) the fact that the operating room is normally used five days a week, and (c) the fact that the average use of each operating room is slightly more than one and one half times per day.

As an example, if there are to be 320 beds, 40 percent of admissions are surgical and the average stay of surgical patients is eight days, the formula would be applied as follows: $x = \frac{.7 \times 320 \times 40 \times 1}{100 \quad 8}$

The above equals 11.2. Thus, 11 operating rooms should be provided.

I have made a diligent review of the material, data, and plans of operating suites of 300-350 bed hospitals and have found tremendous variations from facility to facility. This apparently is due to the great differences in programs and technics. I believe you should think of the design of a hospital in terms of planning around the procedures and technics which are to be used within. Any of the existing plans would only add to the confusion and might discourage a detailed tailoring of the operating suites to meet your specific purposes.

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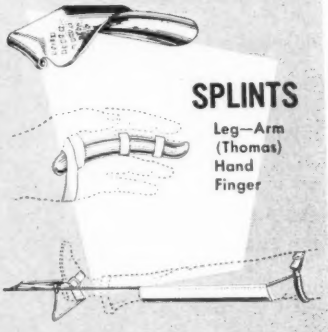
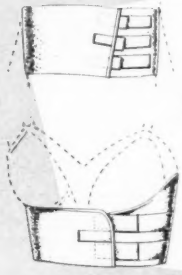
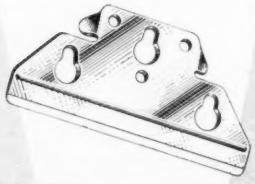


SPLINTS
Leg—Arm
(Thomas)
Hand
Finger

INTERNAL FIXATION
Prostheses



RIB SPLINTS
Head Halters
Arm Slings



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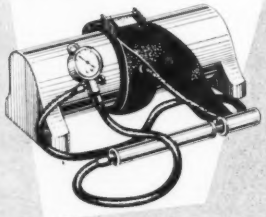

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Review of Hospital Lawsuits

By Leo T. Parker, Attorney at Law

• REASON FOR NON-LIABILITY

An official asked: "Can you give the exact, real reason why the courts exonerated charitable hospitals from liability for injuries to patients, guests and other persons?"

The public policy of many states recognizes the immunity of charitable institutions from liability for negligence for the public good. For example, in Lanahen v. Ancilla Domini Sisters, 72 N. E. (2d) 445, a patient sued a charitable hospital for damages, alleging that she was improperly strapped to an operating table by an inexperienced and careless employee and suffered a "paralytic arm." She charged that the hospital officials carelessly, negligently, improperly and knowingly employed and retained an incompetent and inexperienced employee whose negligence caused her injuries.

The higher court held the hospital not liable, and explained the reason for its decision as follows:

"In organized society, the rights of the individual must, in some instances, be subordinated for the public good. The law has always favored and fostered public charities in ways too numerous to mention, because they are most valuable adjuncts of the state in the promotion of many of the purposes for which the state itself exists."

Town Liable for Hospital Bill

Prior notification of town officials that a medically indigent person will be admitted to the hospital is not necessary if hospitalization or medical assistance is urgently required. If the hospital notifies the supervisor within a "reasonable" time after the patient is admitted, that is sufficient, according to the higher court ruling in the case of *Rockford Memorial Hospital v. Whaples, 165 N.E. (2d) 523.*

Four-year old Ruth Whaples, who lived in Chemung, Ill., was found to have pneumonia. The examining physician made arrangements for her to enter the Rockford Memorial Hospital, about 40 miles from her home. She remained there for approximately one month, returned home, but one week later again entered the hospital and stayed there several days. The hospital bill for services rendered during both periods amounted to $845.45. The hospital sued the town of Chemung to recover this amount.

Testimony brought out that towns in Illinois are required by a state law to furnish hospital services to medically indigent or poverty-stricken persons, and that a state law made the supervisor of the township the overseer of the poor.

The first notice officials of Chemung had that Ruth was a patient at the hospital came in a letter to the town supervisor from the associate director of the hospital. This letter, dated December 4, about three weeks after the child's admission, stated that Ruth was then a patient in the hospital and that an investigation of the financial condition of Ruth's parents disclosed that they were medically indigent. The supervisor was requested to investigate the case and make arrangements to pay for the hospital services rendered. He did not immediately reply to this letter.

The lower court held that the town of Chemung must pay the hospital bill. The higher court, in approving the decision, commented:

"It was unnecessary that notice, prior to the time Ruth entered the hospital, be given Mr. Lush, the supervisor. Appellant (supervisor) was entitled to be notified within a reasonable time after Ruth was brought to the hospital. What was a reasonable time, under the facts and circumstances in this case, was a question for the lower court to determine. It is not contended otherwise. By the inaction of Mr. Lush, after he was notified of the services being furnished Ruth by appellee, he inferentially approved them."

Injury in Parking Lot

A few weeks ago a higher court held that if a hospital provides a parking lot it is obligated to keep the lot free from dangerous conditions.

In Saddler v. Bethel Co., 267 Fed. (2d) 805, the testimony showed that a jury awarded a woman $6,000 damages for injuries she received when she stepped in a hole and broke her ankle while walking across a parking lot. The higher court approved the verdict, saying:

"It being reasonable to infer from the size of the hole that it existed for some time, then it is reasonable to infer that the defendant (dealer) could have discovered the condition by the exercise of reasonable care."

This court went on to explain that the present law requires every hospital corporation to inspect the premises frequently and make them safe for patrons, visitors, and patients.

Health Insurance Newsletter

This material is presented with the cooperation of the New York State Joint Legislative Committee on Health Insurance Plans, through John G. Steinle and Associates, special consultants to the committee.

Union Drugstores. Plans have been announced by 13 major unions with a combined membership of 350,000 to organize and operate a chain of cut-rate drugstores in the metropolitan New York City area. Objectives are to offer union members and their families savings on drugs of at least 30 percent and to establish a pilot project for a contemplated prepaid drug insurance plan.

The new plan, to be known as Medstore, initially intends to establish one drug outlet in each of the city's five boroughs and on Long Island. The Health Insurance Plan of Greater New York is also working closely with the project.

* * *

AMA Survey Under Expert Attack. Nine of the 16 sociologists who took part in a survey of the aged cited by the American Medical Association have sharply criticized its findings. The survey purportedly found that most Americans over 65 are capable of financing their own health care.

Among the criticisms were:

All Negroes were excluded, although many are in low-income groups.

Older persons in institutions and on welfare were not interviewed.

Mrs. Edith M. Sherman, assistant professor of sociology, University of Denver, said: "The conclusions seem highly misleading according to my own local experience", and the Rev. Joseph P. Fitzpatrick. associate professor of sociology, Fordham University, commented: "Obviously the sample excluded the very people most in need of help."

In answering these criticisms, professors James W. Wiggins and Helmut Schoeck, director and associate director respectively, department of sociology and anthropology, Emory University, Atlanta, Ga., defended their study and claimed census estimates proved their sample was representative. They said the critics had not cited current figures to question the findings, "but have rather emitted cries of disbelief and have made public speculations about technics or motives of the authors which could 'explain' our findings."

* * *

Mental Illness in the Over-65 Group. The proportion of older persons filling our mental hospitals is increasing at an alarming rate, according to Sen. Pat McNamara (D., Mich.), chairman, Senate Subcommittee on Problems of the Aged and Aging. On any given day, one out of three beds in public mental hospitals is occupied by a person 65 or older — a total of 165,000 patients.

First admissions to mental hospitals increase rapidly with age and are almost 2½ times as high for those over 65 as for those 25-44 years of age, the senator said in a factual report issued by the Subcommittee. By 1970, he added, it is estimated there will be a 34 percent increase over 1959 in the number of aged patients in mental hospitals.

"We need," he declared, "to ensure that state and federal mental health programs provide early diagnosis, treatment and care in a patient's home community, rather than in a distant institution."

* * *

Committee Report. The latest annual report of the New York State Joint Legislative Committee on Health Insurance Plans is now out. A limited number of copies is being supplied to libraries and researchers with special interest in the subject.

The report includes extensive summaries of important hearings held by the committee during 1959 and early 1960, as well as a comprehensive study of major medical insurance and papers presented by authorities in the field at a conference on health-insurance problems in December, 1959. Requests, not all of which can be filled, should be addressed to the Hon. Fred Forbes, Clerk of the Senate, State Capitol, Albany, N. Y.

* * *

Blue Cross Discounts. Blue Cross of northeast Ohio, long a pioneer among non-profit plans, acted early in October to provide discounts to long-time subscribers and paid-up policies at the age of 65.

In applying for overall rate increases of 27.4 percent, the plan proposed discounts in which the rates for subscribers over 65 could be cut 25 percent after ten years of enrollment and 50 percent after 20 years. If approved, the program would affect 148,000 subscribers over 65 and would entitle about 48,000 persons to rate reductions of 50 percent or more.

At about the same time, Rochester Hospital Service, the Blue Cross plan serving that N.Y. area, announced its special benefits contract, specifically designed to provide coverage for unenrolled people over 65 who are not eligible for the regular community contract. (See February TOPICS for further details.)

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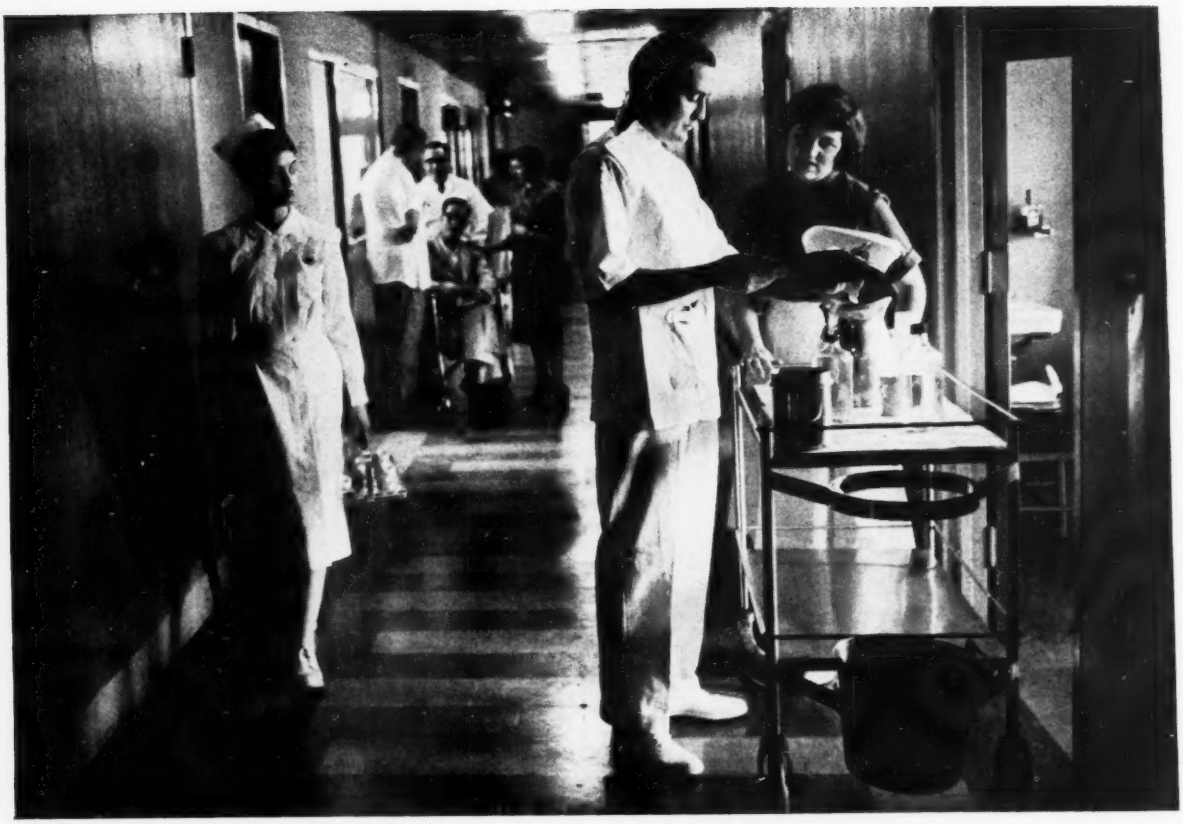

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1. Benson, Margaret E.: **Am. J. Nursing** 57:1136, Sept., 1957. 2. Smylie, H. G.; Webster, C. U., and Bruce, M. L.: **Brit. M. J.** 2:606, Oct. 3, 1959. 3. Ayliffe, G. A. J.; Alder, V. G., and Gillespie, W. A.: **Lancet** 2:456, Sept. 26, 1959.

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THE LAB

The Philosophy of Accuracy and Error

By E. E. Myers, M.D.*

First of a series

The purpose of every test in the laboratory is to arrive at an accurate result efficiently. An inaccurate test may lead to erroneous diagnosis and incorrect treatment.

Accuracy is exactness, or a state of conformity with truth. It is approached through the application of science, and science is knowledge—or, a better, more modern definition, knowledge in action. Science is always a striving toward truth which one can never quite expect to attain.

Depending on criteria and standards there are varying degrees of accuracy, and the term should usually be qualified by "absolute," "high," "low," and so on. Practicality has to be considered too: a stopped clock, for instance, may be exactly correct twice a day, while one running may never be exactly right but may be infinitely more useful.

Error is deviation or departure from accuracy. If one sets a standard for accuracy, error can usually be detected by the proper means; it can be measured and can frequently be reduced or practically eliminated. If accuracy is the result of knowledge, then error is due to ignorance—although other factors such as will, desire, and effort are also involved.

These factors are well summarized by Dr. Campbell Morgan who gave as the cause for most of our difficulties in this world, "Intellectual conceits, emotional depravity, volitional stupidity." Avoidance of error involves both the means of preventing error and of detecting it if it should occur. The first steps in avoiding error are to recognize that error may occur and to understand where and how it may occur.

If the clinician attains an accuracy of 50 percent in diagnosis, it is considered good. The anatomic pathologist cannot expect better than 85 percent accuracy. Yet several procedures in the clinical laboratory (such as blood typing and cross-matching) should reach an accuracy of better than 99.999 percent.

Of course the situations cited above are not entirely comparable, and some examinations in the clinical laboratory (such as in bone marrow study) have considerable error. But what the clinician commonly fails to appreciate is the high degree of accuracy obtainable in the laboratory. Most of the chemistry and similar tests should not vary more than ±2.5 percent from the exact figure. This is usually a satisfactory accuracy for clinical purposes, although it may not be for research.

Classical errors illustrate the difficulties in being certain about anything. For instance, the meter was commonly supposed to be 1/10,000,000 the distance from the equator to the north pole, but then the original measurement was shown to have been in error. The cubic centimeter differs from the milliliter because of an error in not allowing for air dissolved in water.

Practically everyone is susceptible at times to one or more common fallacies and errors. Some common fallacies in medicine include:

—The selection of cause or *non sequitur*: making a cause to fit the effect.

—The use of analogy: there never was an exact analogy in science; the technic is useful only for explanation.

—The application of averages to the individual: the individual may be the rare exception.

—The use of statistics: statistics are helpful when used correctly, but one must remember that "There are lies, damn lies, and statistics."

—The fallacy of experience: "Some people make the same mistake over and over again for 50 years and they call that experience."

It is a common saying that "everyone makes mistakes;" most people live with the idea that mistakes are inevitable and the longer a person goes without making a mistake the more likely he is to make one. This is true only in that it is difficult to be correct and one may not hope to achieve absolute accuracy, but it certainly is not a good philosophy to use in the laboratory. If a laboratory dispenses 10,000 units of blood without a homolytic transfusion reaction, there should be *less* danger in the next 10,000.

However, constant rededication and effort are needed to prevent error. Some people develop a habit of making errors. and some seem to be born with a proclivity in that direction. But accuracy can be developed as habit. For this one must begin with attention to detail: "He that is faithful in that which is least is faithful also in much. . ."

Another common fallacy pertains to chance. It is questionable whether anything should be ascribed to "chance." The term

(Continued on next page)

*Director, clinical and research laboratories, The Myers Clinic and Broaddus Hospital, Philippi, W. Va.

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"probability" is more acceptable, since every occurrence is the result of one or more causes. Some of these causes may be uncontrollable; the error that results from these then could be deemed unavoidable.

Where feasible, there should be a standard for every test in the laboratory. When run repeatedly the standard should have the minimum allowable variation which has been determined as satisfactory for the particular laboratory and the particular purpose. This is called reproducibility, or precision. A test may be highly reproducible and have good precision, but it may not be accurate unless the values fall fairly evenly on either side of the standard.

A popular designation of acceptable deviation from a standard, or true value, is "standard deviation." This is a statistical term for a measure of dispersion; it is the square root of the arithmetic mean of the squared deviations from the mean, and it is generally considered that ±2SD are satisfactory limits of variation of results. However, standard deviation does not have an "obvious" meaning. It varies with the spread of results and thus it is an unnecessarily complicated tool to use in the laboratory. Instead, it would be simpler and more meaningful to use percent variation, with which comparisons between laboratories can be made more easily.

Dogmatism and categorical statement have no place in the laboratory. All strong words such as *never, always, absolutely,* and *positively* should seldom if ever be used. Instead, the words *possibly, probably,* and *maybe,* will be found most frequently in the vocabulary of the good laboratory worker.

One should observe: "Moderation in all things, even in moderation." It is necessary to develop a critical conscience, but it is just as bad to be hyperscientific or hypercritical as it is to be hypo. Some guides to accuracy found useful to impress laboratory workers are: "Let him who thinketh he standeth take heed lest he fall," "Be honest with yourself," and "Never say always and never say never." Humility is a necessary quality in the good laboratory worker.

There are many factors which affect accuracy involved in every test. These will be discussed next month.

An Index for Diagnostic Studies

By E. Irene Leach and Frances G. Felton, Ph.D.*

The procedure described in this article is an award-winning idea in the VA's 1959 incentive awards program for suggesting better ways of performing specific tasks.

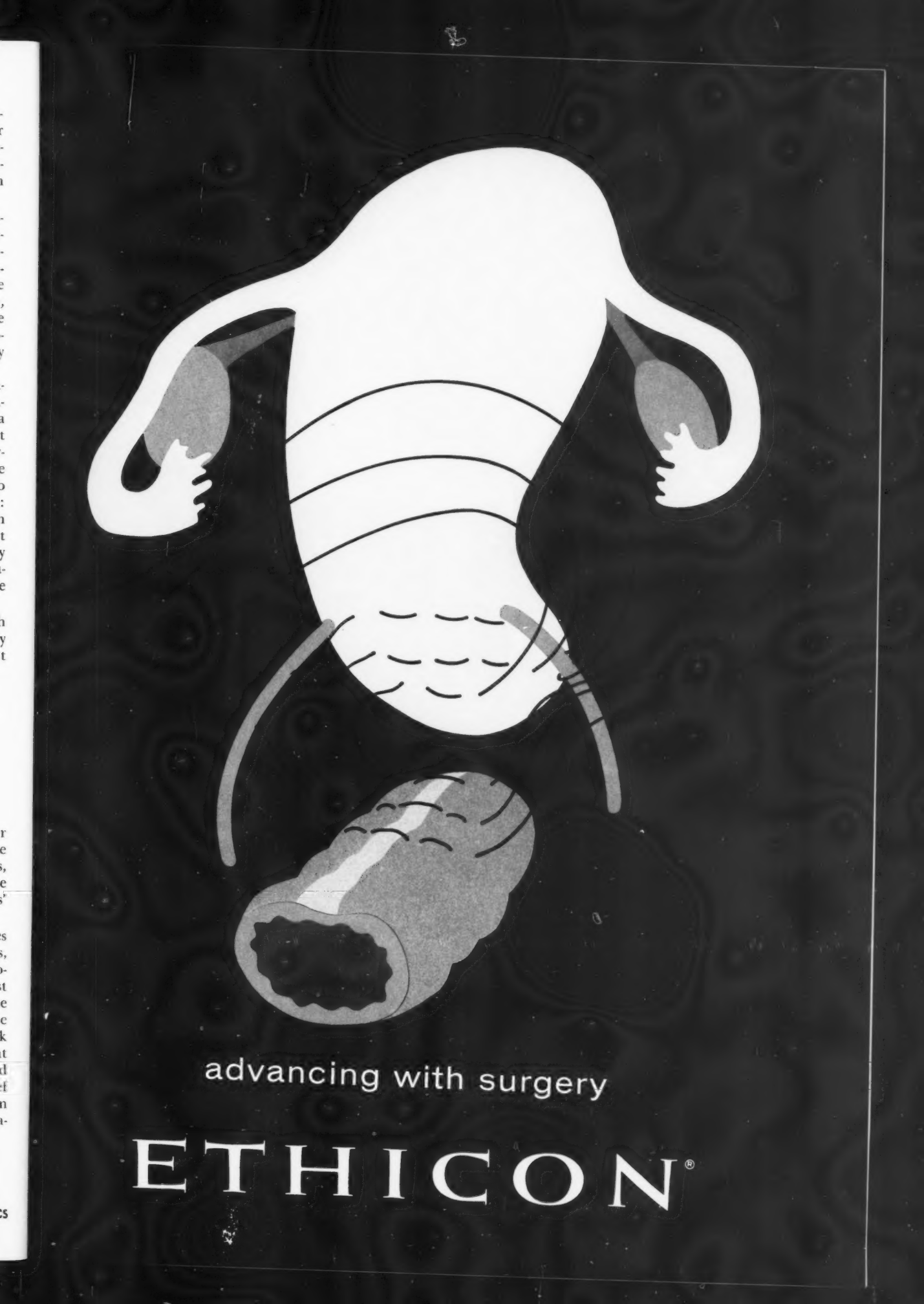
The test and procedures index for diagnostic studies used at the Oklahoma City VA Hospital has greatly facilitated prompt and correct preparation of requests and assures proper handling even by inexperienced personnel.

Requisitions for various laboratory tests and procedures are submitted on special forms initiated by the ward clerk upon the order of the physician. Results of the tests are recorded on these forms, which are then returned to the ward to be placed in the patients' clinical records.

There are many different types of requisition forms – urinalysis, blood chemistry, hematology, radiographic report, miscellaneous test or examination, and so on. Some forms require writing in the name of the test while on others a check mark is sufficient. It is important that the requisition forms be filled out properly as they are the chief medium of communication between the ward physician and the labora-

(*Continued on page* 69)

*Miss Leach is supervisor, ward clerk unit, registrar division; Dr. Felton is chief, clinical laboratory section, laboratory service, Oklahoma City VA Hospital.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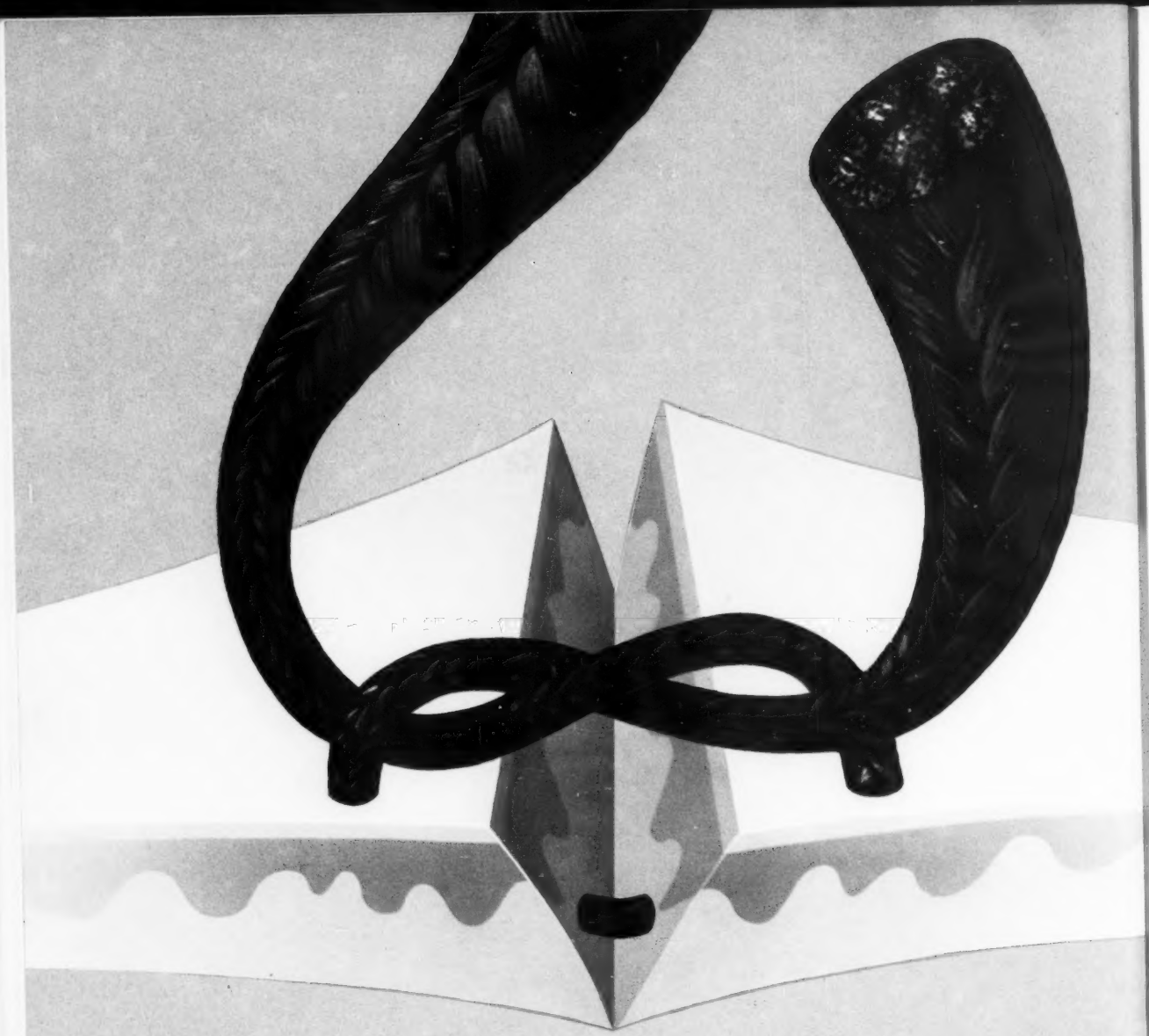

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(*Continued from page* 66)

tory performing the test.

The test and procedure file has been developed to furnish information to the wards not only in the preparation of the requisition slip but also regarding specimen collection and preparation of the patient. This index is a comprehensive one; it includes all laboratory tests, x-rays and other diagnostic procedures used at the hospital, with appropriate instructions for procuring each test. The information thus available includes:

1. Name of procedure or test.
2. Form used.
3. Any necessary limitation in oral intake prior to test.
4. Type of specimen and whether specimen identification slip (VA form 10-2688) is necessary.
5. Name of department or specific room number where procedure is performed.
6. Whether it must be scheduled in advance.
7. Whether the request must be signed by a physician.
8. Whether a surgical permit is required.
9. Remarks and any other pertinent information or instructions.

A plate for each procedure is cut on the addressograph. Due to limited space of five lines and 40 spaces to a plate, each is very concise. Only the numbered items necessary to explain each procedure are used.

These plates are placed in a permanent file and when the occasion arises for correction, the plate is pulled and the correction is made or a new plate is cut.

Corrected cards are run off for *all* files. If a test is discontinued, that plate and card can be removed from the files.

The file is cross-indexed and common and accepted abbreviations are utilized. Cards for the file are contained in a rotary file in one complete alphabet for easy use.

Many of these procedures are used only on certain wards or services. In the absence of the regular ward clerk *anyone* – even the most inexperienced of personnel – can quickly find out from the index the proper method of preparing a request for any procedure.

This eliminates the necessity for the laboratory to return improperly prepared requests and also avoids phone calls to the departments regarding correct preparation of requests.

The time saved of the ward clerks' supervisor in training new clerks is well worth the file.

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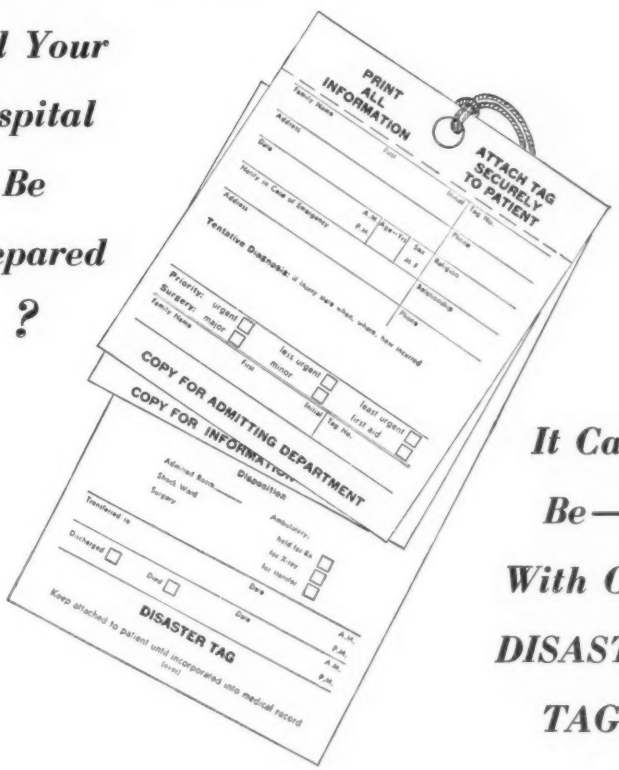

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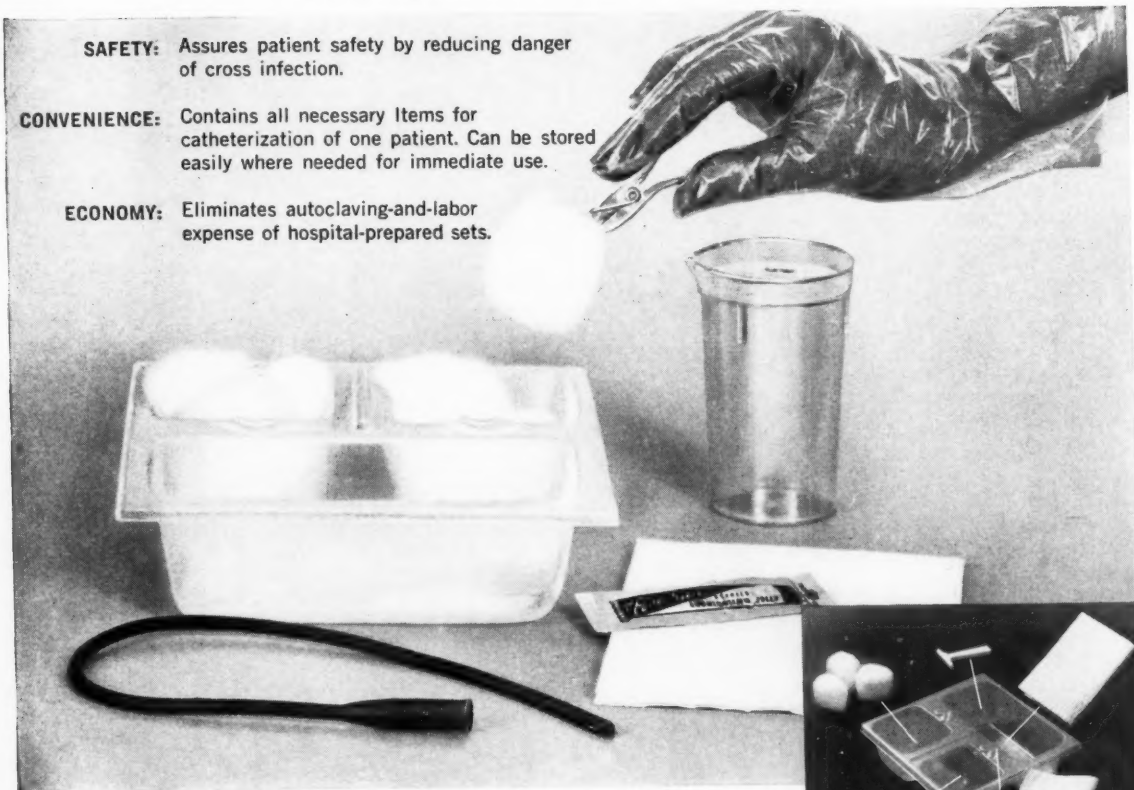

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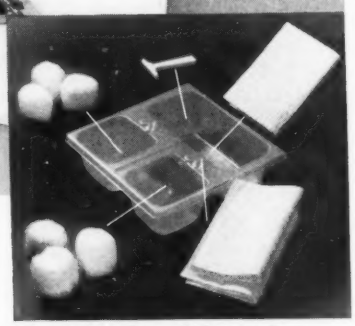

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Treatment of Urinary-Tract Infections With Antiseptic-Antispasmodic Agent

By M. J. Renner, M.D.,* P. Reiser, M.D.,** J. Trendler, M.D., S. Printz, M.D., and M. S. Robinson, M.D.

Simple therapy should be tried first in patients with symptoms of urinary-tract infections. If symptoms are not relieved, the physician should conduct a complete urologic examination,[1] as well as a survey of the patient's general health and a search for any possible foci of infection.[2]

Unfortunately, some clinicians use sulfonamides and broad-spectrum antibiotics to the exclusion of all other therapeutic agents. More simple agents which cause fewer side-effects are ignored.[3] When no improvement, or only temporary improvement, results, they change the antibiotic being used rather than conduct a urologic examination. The widespread use of such agents has resulted in an increased number of drug-resistant bacteria.[4]

The purpose of this article is to focus attention on the therapeutic effectiveness of a urinary antiseptic-antispasmodic agent.† This drug contains neither sulfonamides nor the broad-spectrum antibiotics. Its use is not accompanied by any of the side-effects noted when the latter drugs are administered.

Effective doses of atropine and hyoscyamine are included, so that patients are relieved from urinary retention and tenesmus. Urinary antiseptics, including benzoic acid, methylene blue, methenamine and salol are incorporated into the tablet in effective amounts. These four agents are also bacteriostatic and bactericidal.

A previous report has described its usefulness in treating urinary-tract infections in geriatric patients.[5] The investigator found it to be effective and free of side-effects, points which he stressed as being important in older patients with serious, co-existing diseases. Other studies,[6,7] involving 150 younger patients with urinary-tract infections, also showed that the product was effective and free of side-effects.

Method of Study

The present series includes 50 private patients with urinary-tract infections who were studied in the following manner:

Before therapy was instituted, a complete urinalysis was done on each patient. The clinical laboratory studies included determination of the urinary pH, specific gravity, presence of albumin, sugar, casts, or pus cells, and two cultures of the infecting micro-organisms (there is some doubt as to the reliability of a single culture[8]). In the female, specimens for culture were secured by aseptic catheterization. In the case of the male, specimens were usually collected from the voided stream after the first portion had been passed.

Microscopic analyses were done every re-visit from seven to 10 days thereafter throughout the course of therapy, and cultures were submitted when the microscopic analyses became negative for pus or bacteria. Patients whose cultures were reported positive were continued on the medication for an additional five to seven days.

The therapeutic regimen consisted of two Urised tablets, each composed of hyoscyamine, methenamine, atropine sulfate, methylene blue, benzoic acid, salol and gelsemium, administered orally four times daily, after each meal and before retiring. No changes were made in the patient's diet, but the patient was instructed to drink a

(Continued on next page)

*Associate urologist, Brooklyn Women's Hospital, New York City.
**Senior clinical assistant urologist, Mount Sinai Hospital, New York City.
†Urised, Chicago Pharmacal Co., Chicago.

glass of water with each dose.

All patients were carefully questioned and examined periodically for the presence of untoward signs or symptoms such as nausea, vomiting, headache, hematuria, dermatitis, oliguria, dysuria, polyuria, nocturia, or burning on micturition.

In all but the most severe cases, no additional medication was administered. However, appropriate therapeutic measures such as dilation of strictures, bladder irrigations, prostatic massage, and surgical procedures were carried out as indicated. In seven cases of severe, chronic infection, antibiotics (erythromycin, tetracycline or Syncillin) were also given.

The patients in this series were categorized as follows: 11 had acute cystitis; 4, chronic cystitis; 7, acute pyelonephritis; 7, chronic pyelonephritis; 7, acute trigonitis; 3, chronic trigonitis; 3, adenoma of prostate with infection; 4, chronic prostatitis; and 4, renal calculi.

The infecting organisms included *Escherichia coli, Staphylococcus aureus,* mixed staphylococcus and *Escherichia coli, Staphyloccus albus, Aerobacter aerogenes, B. proteus,* Beta and Gamma streptococcus, and pseudomonas.

Patients were regarded as having an "excellent" response to therapy if their urine became negative microscopically and on culture. Response was recorded as "fair" if there was diminution in the number of the infecting organism (s). "Poor" response was recorded if there was no diminution in number and no symptomatic improvement.

Of the 35 patients with acute infections, 30 (85 percent) had excellent response, five (15 percent) had fair response, and none had poor response. Of the 15 patients with chronic urinary-tract infections, nine (60 percent) had excellent response, four (26 percent) had fair response, and two (14 percent) had poor response.

The average duration of therapy required to bring about a negative urine culture was 10-21 days, although some cases, such as acute cystitis, responded within three to seven days. Deep-seated or obstructive lesions required repetitive therapy as long as two to four weeks.

Toxicity

There were no untoward reactions in any patient resulting from the use of the drug. No albumin, casts, or hematuria were produced, nor was any other evidence of renal damage due to drug therapy observed in this series of cases. In those instances in which these elements were noted in the urine prior to administration of the drug, there was no aggravation of the condition following drug therapy.

Discussion

In the studies which have been described, the effect of Urised has been tested under uniform conditions of treatment and observation in a series of 50 patients, all of whom had urinary-tract infection. Following treatment, there was a fall in the number of bacteria which could be cultured from the urine of 48 of the patients studied.

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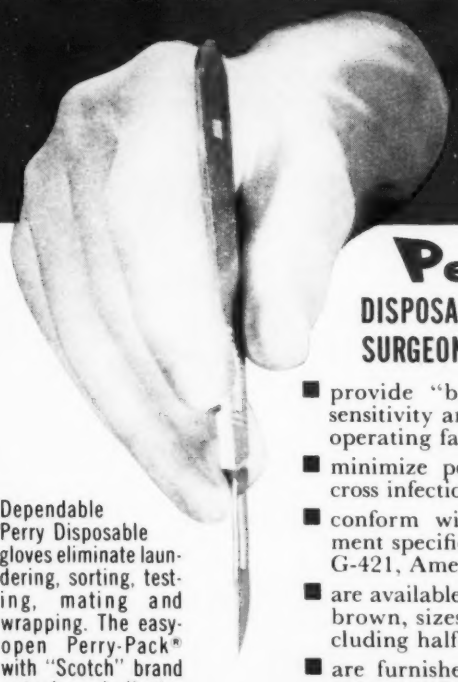

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The following typical case reports are illustrative of the action of the drug in various urinary infections:

K. K., male, adult. Clinical diagnosis, acute cystitis. Signs and symptoms consisted of frequency and urgency of urination, together with irritation, dribbling, and tenderness over the bladder. The infecting organisms were *Staphylococcus aureus* and *Beta streptococcus*. The patient was given two tablets of Urised after each meal and before retiring. Diet was not restricted.

After therapy, the urine was clear with negative culture. Signs and symptoms of urinary infection subsided, and the patient has been well since this episode.

B.S., female, adult. Clinical diagnosis, acute pyelonephritis. This patient was first seen in the office with dysuria and backaches. Microscopic examination of the urine revealed that pus was present, and the culture showed *Staphylococcus aureus*. The patient was given two tablets of the drug four times daily. When the patient returned to the office, culture was negative. There was marked relief of symptoms.

J.J., male, adult. Clinical diagnosis, chronic prostatitis. The patient complained of backache, pressure pain in the rectum, frequency, and burning. On palpation per rectum, an enlarged benign prostate was noted. The urine culture showed the presence of *Beta streptococcus* and *Staphylococcus aureus*. The patient was given two tablets of Urised four times daily, and when the number of organisms did not decrease after 10 days of therapy, Syncillin, one 500 mg. tablet three times daily, was prescribed. The culture became negative after 21 days.

L.D., female, adult. Clinical diagnosis, left renal calculi with infection. Symptoms included a burning sensation and pain in the back. The urine showed pus, and the culture revealed that *Aerobacter aerogenes* was the infecting organism. The patient was placed on Urised therapy, two tablets four times daily. Approximately eight days later, a culture showed that *Aerobacter aerogenes* was still present. However, the urine was free of pus and the patient was partially relieved of her symptoms.

Summary and Conclusions

In this clinical study of 50 cases of common urinary-tract infections, the drug proved to be effective in 48 cases, or approximately 96 percent of the patients. The average duration of therapy required to sterilize the urine was seven to 10 days, whereas infections associated with deep-seated or obstructive lesions required as long as 14-28 days before favorable response was obtained.

The drug was found to be virtually nontoxic in therapeutic dosage. No patient exhibited any side-effects which could be attributed to it.

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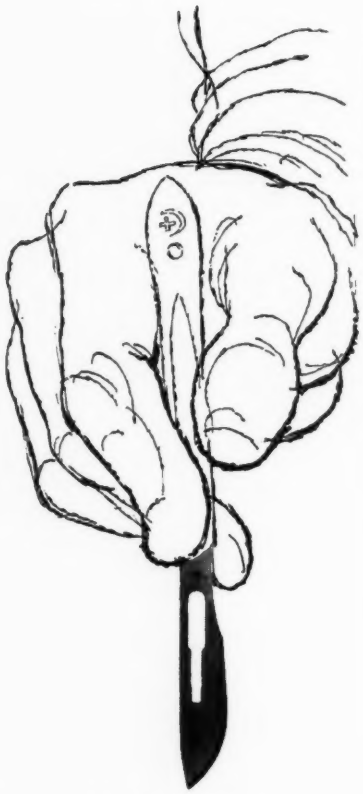

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Alvodine (ethanesulphonate, brand of piminodine ethanesulphonate) is used particularly for postoperative analgesia and ambulatory patients. The recommended oral dose for adults is from 25 to 50 mg. for every 4 to 6 hours as required.

Supplied for intravenous use in ampuls of 1 cc. containing 20 mg. of Alvodine in sterile aqueous solution, in boxes of 25 and 100. Scored tablets of 50 mg. in bottles containing 100 and 500. Narcotic blank required.

Suppresses Appetite, Calms

Abbott Laboratories announces Desbutal Gradumet, a long-acting dosage form that aids in the management of psychosomatic complaints and in the control of obesity. The new tablet combines Desoxyn (methamphetamine hydrochloride, Abbott), a central nervous system stimulant and appetite inhibitor, with Nembutal (pentobarbital sodium, Abbott), classic hypnotic-sedative. A parallel release action tunes the effects of one drug to the other.

Advised dosage is one tablet in the morning. Supplied as Desbutal 10 Gradumet, containing 10 mg. Desoxyn and 60 mg. Nembutal, or Desbutal 15 Gradumet, containing 15 mg. Desoxyn and 90 mg. Nembutal, in bottles of 100 and 500.

New Antitussive Product

Hycomine Compound in tablet form has been announced by Endo Laboratories for relief of a wide variety of allergic and nonallergic symptoms of respiratory tract infections, including those of the common cold.

The tablets contain dihydrocodeinone as a sedative, hometropine methylbromide as a muscle relaxant, plus the antihistamine chlorpheniramine maleate, the decongestant phenylephrine hydrochloride, and N-acetyl-p-aminophenol, an analgesic-antipyretic, and caffeine to combat lassitude.

Advised dosage for adults is one tablet four times daily; children (6 to 12), ½ tablet four times daily, and children (2 to 6), ½ tablet twice daily. Available as oral prescription in bottles of 100, 500 and 1000.

Non-narcotic Analgesic

Irwin Neisler & Co. has announced a new tablet, Analexin, composed of a single chemical, phenyramidol, that is both a general non-narcotic analgesic and an effective muscle relaxant, to offer relief for the total pain experience. The analgesic potency of each tablet is clinically equivalent to that of 1 grain of codeine, but phenyramidol is nonhabituating.

Available as Analexin (200 mg. phenyramidol) or Analexin-AF (100 mg. phenyramidol and 300 mg. aluminum aspirin), Analexin is indicated for pain relief in dysmenorrhea; abdominal or epigastric distress; genitourinary conditions; tension headache, gout, toothache, dry socket pain, musculoskeletal spasm and pain in low back, myalgia, sprains and strains, glass arm, wry neck, osteoarthritis. Analexin-AF is suggested for relief of pain and musculoskeletal tension associated with inflammatory processes and fever.

Recommended dosage is 2 tablets every four hours; in dysmenorrhea, two tablets at outset of pain, then one every two to four hours.

(Continued from page 9)

alleled by a rise in the number of accidents.

Although many of the early accident hazards have been removed by improved design of the supporting structures, the most dangerous place on the trampoline is still the center of the mat. Serious, permanently crippling, even fatal injuries occur here, from acute flexion of the spine.

The research team, W. G. Ellis, M.D., David Green, B.S., Norman Holzaepfel, M.A., and A. L. Sahs, M.D., cite several cases in which the nervous system was injured by trampoline accidents. One fatal case was a 19-year-old man who landed on his shoulders and back after completing an elementary back drop. He immediately became numb and paralyzed in his arms and legs, and examination revealed dislocation of a bone in the spinal cord. He died two weeks later.

The chief hazard, according to the research team, lies in attempting difficult gymnastic feats before mastering the fundamentals. They recommend a minimum training period of ten hours before somersaulting should be attempted.

Muscles Rustle; Scientists Tune In

With the development of a new noise amplifier, two scientists have been able to "tune in" on the electro-magnetic signals of a single muscle. William Candib, M.D., and Dr. W. K. Volkers, an electronics engineer, have termed the signals "muscle rustle," and state that the noises resemble waves breaking on a beach, rain on a tin roof, and a jet streaking through the sky.

Doctors have long been able to detect electrical signals generated from human muscles and nerves, but the signals have been so filled with "static"—interference from nearby muscles—that the methods have not been precise.

Dr. Candib suggests that the strength and frequency range of the new apparatus should make it valuable in the diagnosis of muscular disease.

The two researchers use transistors or special vacuum tube circuits that minimize noise. Special wave filters emphasize a particular frequency component and suppress other frequencies, enabling the monitoring of a single muscle.

It was found that small muscles, such as those that flex the fingers or those near the eyes, were particularly effective signal generaters.

Women Rest, Men Work During Heart Attack

Despite the pain caused by a heart attack, most men continue their physical activities; women stop what they are doing and rest.

Dr. Klaus A. J. Jarvinen, lecturer in internal medicine, Helsinki, Finland, University, studied the physical exertions of 102 men and 31 women immediately after the onset of acute myocardial infarction. He reports that 77 per cent of the men remained at work or even walked considerable distances after onset. Most of the women —72 percent—stopped activity.

Dr. Jarvinen suggests that the women's "more realistic view of the severe pain" may contribute to the fact that more men than women die of heart attacks.

New Migraine Treatment the Oldest — Sympathy

Migraine headache sufferers can be greatly helped by a sympathetic relationship and a kindly, helpful attitude on the part of the physician, according to Adrian M. Ostfeld, Chicago.

Patients could be further helped by insight into the factors in their lives which may cause the headaches. A patient-physician relationship can be established in which some attempt is made to have the patient recognize the elements in his life that may be causing him to go in the wrong direction or at the wrong pace.

Dr. Ostfeld estimates that two out of three migraine patients can be helped by a physician who is interested in human problems and is willing to spend a minimum of time with a patient in reviewing them with him.

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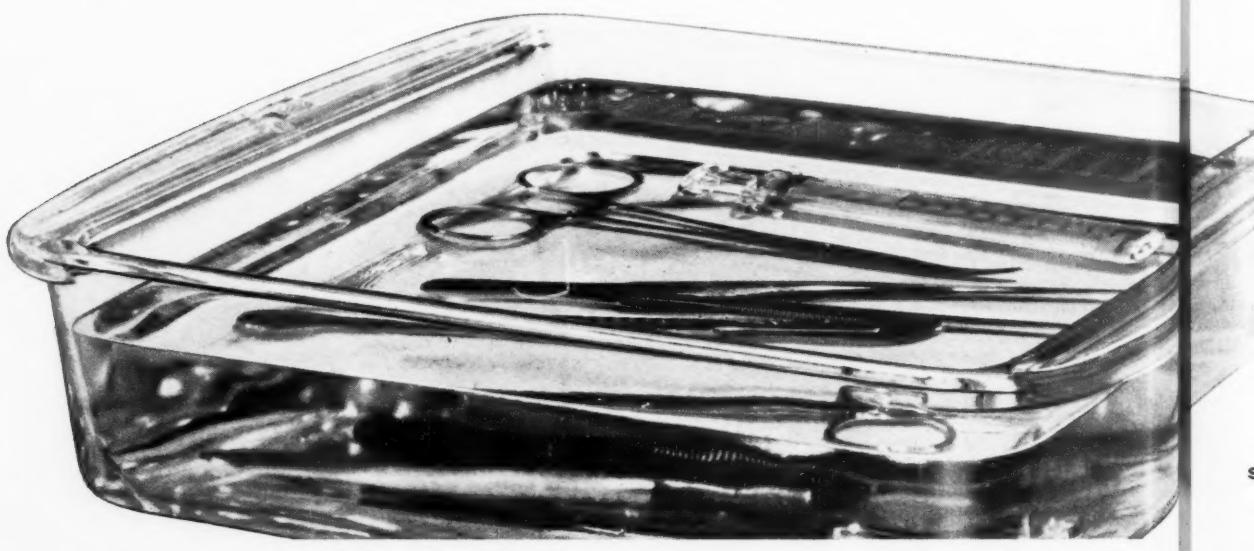

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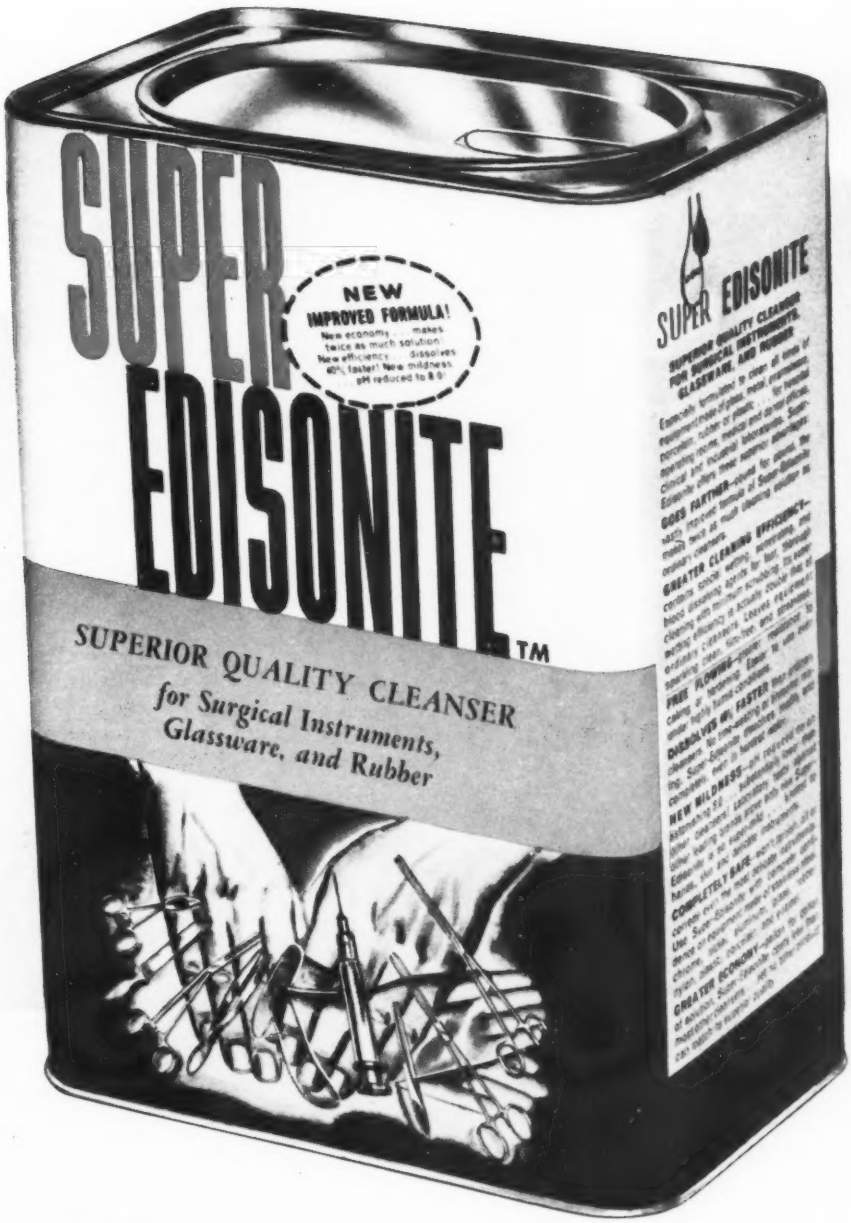

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An instrument developed at Westminster Hospital, London, Eng., sounds an alarm at any irregularity in the heart action of patients recovering from heart surgery. It is proving useful in post-operative care and is being used regularly in cases of "deep freeze" surgery.

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The instrument has also been used during general anaesthesia, and has behaved perfectly. Sudden cardiac arrest occurs from time to time even in minor surgery and the alarm is useful in giving an early warning in such cases.

'Regulators' Prevent Leukemia Hemorrhage

Dr. Bernhard Steinberg, pathologist and director, Toledo Hospital Institute of Medical Research, has announced the effectiveness of two substances called "regulators" which prevent hemorrhage, the main cause of death in leukemia.

The substances — thrombopiesin and megakaryopiesin — correct deficiencies in the bone marrow and blood, thus removing the cause of fatal hemorrhaging.

Dr. Steinberg said that it would be at least two more years before the regulators are ready for public consumption. A year will be spent in further testing.

Dr. Steinberg and his staff, financed by the John A. Hartford Foundation, have already spent 14 years in their research.

Public Health Service Forms New Nursing Division

The U. S. Public Health Service has announced the formation of the division of nursing, to operate within the Bureau of State Services. The new division brings together two nursing units: the division of public health nursing from the Bureau of State Services, and the division of nursing resources from the Bureau of Medical Services.

All functions of the two former nursing units will be continued in the division of nursing and other functions will be added as the need arises.

Combination of the two nursing units follows the pattern recommended for reorganization of the entire public health service. The new division will be concerned chiefly with the hospital and public health nursing aspects of community health.

Technic Shortens Hospital Stay for Burn Victims

Long hospitalization following extensive burns has been reduced by more than one-fifth with a new technic described by Merton L. Griswold, M.D., Muhlenberg Hospital, Plainfield, N. J.

Dr. Griswold's success in cutting the burned patient's hospital stay by close to a week was accomplished by an early removal of the thick crust which typically forms over a deep burn. As soon as the patient's condition is stabilized and he is considered strong enough to undergo anesthesia he is taken to surgery for removal of the dead tissue. The procedure has been performed as early as three to seven days following the injury.

The result, says Dr. Griswold, is an improvement in the patient's general condition, usually a steady reduction in fever, and the rapid development of a smooth surface for skin grafting. The grafting is usually started a week after the burn crust's removal.

Virus Linked to Eight Human Cancers

A virus has been linked with eight human cancers in findings reported by a research team at the Sloan Kettering Institute for Cancer Research. The virus was isolated from transplanted tumors of the mouth, muscle, ovary, and other tissues, and from the non-cancerous livers and spleens of cancer patients.

Before this, the only human cancer reported to have been associated with a virus was leukemia. Thus, the new report adds considerable weight to the growing speculation that a wide range of human cancers may be virus-caused.

Study Suggests New Concept of Pre-Surgery Medication

Two physicians report that in a study of 400 surgery patients, there was a 98 percent effectiveness in psychic sedation by giving a tranquilizer to the patients before they entered the operating room.

Dr. Robert W. Grady and Dr. Alvin L. Rich, director and senior resident, respectively, department of anesthesiology, Lloyd Nolan Hospital, Fairfield, Ala., found that these patients went into O.R. with their mental and physical processes functioning at a normal hemostatic level. This, they said, is in contrast to the present method of premedicating a patient with potent cortical and medullary depressants so that he enters surgery unresponsive, unconscious, and hypotensive.

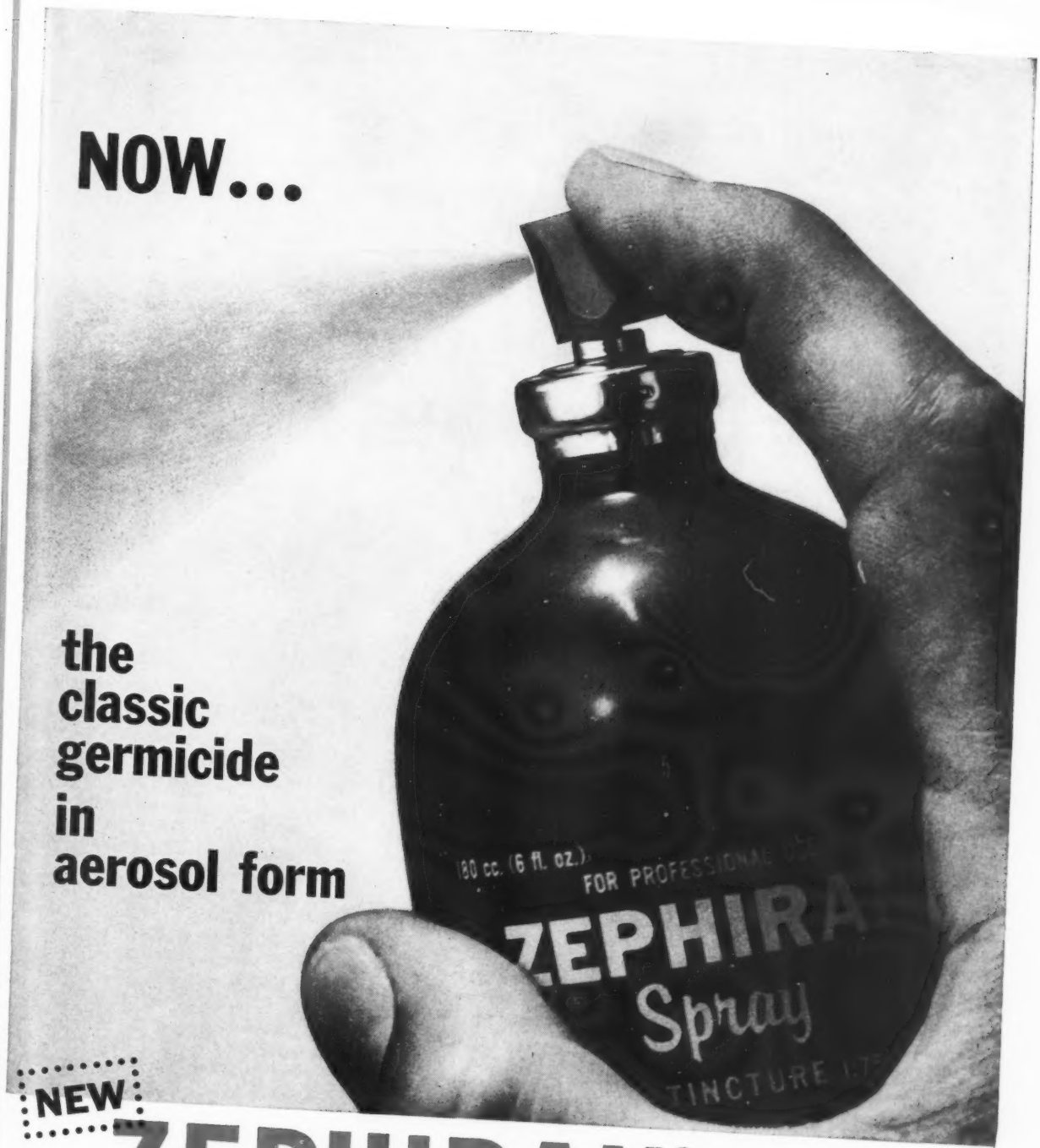
They declared: "The concept of amnesia as a necessity for premedication is definitely being challenged. It is our belief that elimination of the mystery so often associated with anesthesia and surgery will ultimately benefit the patient as well as the physician."

Possible Immunization For Hepatitis

Studies reported in a recent issue of the *Journal of the American Medical Association* support the theory that immunization against infectious hepatitis may be achieved with gamma globulin.

The disease is caused by a virus entering the body through the mouth, nose, or throat. The studies indicated that gamma globulin was able to suppress the symptoms of hepatitis, mainly jaundice, although it did not prevent infection by the virus.

JAMA commented, "Measles, modified by gamma globulin, is the obvious parallel. If it can be shown that "modified hepatitis," i.e., without jaundice, is as benign as modified measles and is also followed in most cases by immunity, then this method of artificial active immunization should be recommended."



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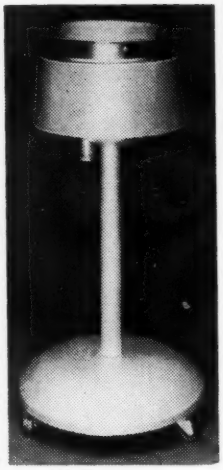

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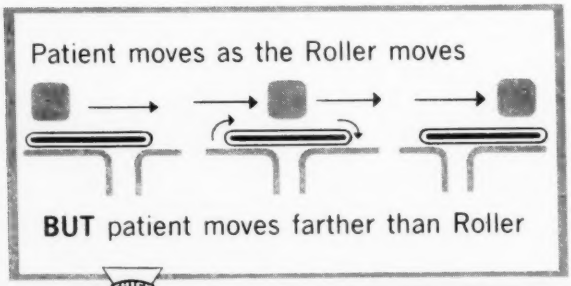

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AMA

(*Continued from page 31*)

From the moment of birth, as we begin to be subjected to the strains and stresses of living, there inevitably ensue degenerative processes which gradually lead to chronic disease and disability in all of us. Those of us who are past 40, with very few exceptions, are the subjects of demonstrable pathology of various kinds which will be with us until we die.

Thus, the problems of learning to live with chronic illness and disability are universal, an existential consequence of being human, different only in degree from the problem which we must all face in learning to live with the specter of death. Some of us, of course, are more disabled than others.

The problem of chronic illness will undoubtedly become more important as the population grows older. However, the chronically ill and disabled do not belong only to the aged portion of the population. Of the 5.3 million individuals in this country who are chronically ill, it is estimated that 26.8 percent are under 45 years of age.

Many well persons have a stereotyped although vague idea of how they expect the disabled to act and feel. The disabled person gets the impression that healthy persons do not expect him to be normal, and therefore he is apt to assume the behavior expected of him. This attitude of the well, as experienced by the disabled, may have profound consequences.

Negative feelings produced in healthy people by their contact with the disabled may be expressed in a variety of ways, either directly as overt rejection, indifference, or even cruelty, or indirectly through reaction formations such as excessive sympathy, a prying kind of curiosity, or the sort of pseudo-helpfulness which prevents the patient from doing as much as he is able to do, thus making him more helpless than he actually has to be.

In treating the chronically ill patient, it is important that the physician take into account his emotional needs. For example, in considering the prescription of a wheel chair the physician should realize that the patient often will regard it not simply as a mechanical device but as a badge of disability. A recognition that the wheel chair has a symbolic as well as a utilitarian value may prevent the physician from causing a serious depression by prescribing one. —*Paul Chodoff, M.D.*, Washington, D.C.

Simple Resuscitator Is Effective Aid in Mouth-to-Mouth Breathing

The more common methods of emergency artificial resuscitation today fall far short of the ideal objective of free exchange of oxygen and carbon dioxide, except for the physiological method of using exhaled air. To retain the basic principle of this method and at the same time to eliminate important objections, a new technic has been evolved as a result of repeatd careful experimentation. It depends on the use of an oral resuscitator called the Venti-Breather.

This simple adjunct for mouth-to-mouth rescue

breathing consists of a flexible plastisol face mask which covers the victim's nose and mouth. A plastic tube with a replaceable mouthpiece is inserted into the neck of the mask. The tube contains a simple piston-like valve, actuated by the rescuer's exhaled breath, which contains adequate life-sustaining oxygen for emergency resuscitation.

The exhaled breath is directed to the victim's air passages and lungs, and in turn the breath of the victim is diverted to the atmosphere and not back into the mouth or face of the operator.

Use of the device eliminates the possibility of injury to the victim's natural air passage and the esophagus. It utilizes and does not embarrass the natural airway; it eliminates the necessity of compression of the nares, and of introducing fingers in the mouth of the victim to position the lower jaw or to effect a seal. It makes possible the simultaneous or separate use of the nasopharyngeal and oral entrance to the natural airway, especially necessary in cases of spasticity of the muscles of mastication.

The victim's ineffective attempts to breathe can be reinforced by the rescuer. Use of the device also facilitates the removal from the patient's lungs of volatile toxic substances such as cyanide vapors.

The untrained individual can manipulate the resuscitator with one hand and use the other for vitally important subsidiary maneuvers, such as the toilet of the oral cavity and pharynx, proper positioning of the victim's head, the administration of hypodermic medication, and the compression of the upper abdomen to aid the expulsion of air from the stomach.

The device is adaptable for use in laryngectomized individuals, and it makes possible efficient resuscitation efforts by young children in cases of adult victims.

This resuscitator assembled for immediate use can be made available in the patient's room, in the hospital corridor, at the nursing station, in the emergency room, the admitting office, the blood donor station, the laboratory and the x-ray departments. The breathing tube containing the valve can be quickly removed so that the mask alone may be utilized for insufflation of the victim's lungs, as well as for simple inhalation purposes.—*Allen S. Cross, M.D.*, Washington, D.C.

From the Scientific Exhibits

Report Success with Tape In Closing Surgical Wounds

A new adhesive tape has proved successful in closing wounds and incisions usually requiring stitches, according to Theodore Golden, M.D., New York City; Albert H. Levy, M.D., and William O'Connor, M.D., East Orange, N.J.

Their exhibit reported on preliminary results obtained in 300 cases during the past 18 months. With the new tape, Dr. Golden said, wounds and incisions of every description and in every anatomic location were closed successfully and complete wound healing was affected without complication and with most desirable functional and cosmetic results. The tape has

(*Continued on page* 84)

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(*Continued from page* 81)

demonstrated a high degree of adhesion and absence of skin irritation, according to Dr. Golden.

Injections of Placebo Lower Blood Pressure

Injections of a placebo substance have been found capable of lowering blood pressure for nearly three years, reported three University of Mississippi physicians. However, a non-medical substance administered in oral tablet form did not cause a decrease in blood pressure, said Raymond F. Grenfell, M.D., Arthur H. Briggs, M.D., and William C. Holland, M.D.

The controlled, double-blind study, begun in 1956, involved 134 patients. Among 70 given injections, roughly half received hydrogenated ergot alkaloids, while the other half were given a placebo.

The placebo by injection caused a statistically significant decrease in the systolic blood pressure for 59 weeks and in the diastolic blood pressure for 143 weeks.

Patients who received the hydrogenated ergot alkaloids by injection showed a decrease in the systolic and diastolic blood pressure comparable to that obtained with the injected placebo.

Among 60 patients given tablets by mouth, some received drugs and some placebo. However, one placebo tablet given three times a day did not cause a decrease in blood pressure, as did the placebo injection given every two weeks. Patients who were given the oral hydrogenated alkaloids of ergot had a significant decrease in blood pressure.

The study demonstrates, the doctors pointed out, how much more effect an injection has on a measurable phase of body function, such as blood pressure, compared to a substance taken orally.

The study will be continued indefinitely in an attempt to determine how long blood pressure can be lowered by placebo. At the same time, the physicians said, it will be observed whether a simple mathematical decrease in blood pressure is in itself of value in improving the basic process of high blood pressure and whether the decrease of blood pressure halts the progression of damage to the heart and kidneys.

Emotional Factors Secondary In Allergic Disorders

Emotional factors are of only secondary importance in allergic disorders, such as chronic asthma or perennial hay fever, according to Jerome Miller, M.D., Philadelphia.

Emotions may influence the course of allergic disorders, and repeated allergic attacks may themselves generate emotional distress, producing a vicious circle characteristic of anxiety, tension, and apprehension. However, psychological factors are not responsible for producing allergic manifestation, Dr. Miller reported in an exhibit on the treatment of emotional problems in allergic disorders.

At the same time, he said, management of the emotionally disturbed allergic patient becomes increasingly difficult unless the emotional factors are taken into consideration and adequately treated.

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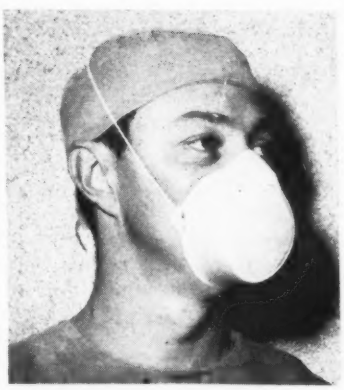


Fig. 1: Surgical Mask No. 540.

Experience with a New Surgical Mask

By M. M. Musselman, M.D., H. W. McFadden, Jr., M.D., M. R. Cosand, M.D., and J. W. Porter, M.D.*

A good surgical mask must effectively filter bacteria. Yet, most surgical masks in use today filter out less than 10 percent of the bacteria after being used for 30 minutes. Fortunately, more people are becoming aware that a false sense of security results from reliance on these masks. The development of a surgical mask that can effectively filter bacteria has received renewed interest.

In 1897 Johann von Mikulicz Radecki[1] described a surgical mask composed of one layer of gauze. Fleugge[2] in 1897 demonstrated the danger of infection from bacteria-laden droplets sprayed from the nose and mouth during speech. Huebner[3] in 1893 and Lord Moynihan[4] in 1906 recommended the use of masks during operations.

Huebner recommended that masks be made of two layers of gauze and that they be worn at a distance from the nose. He showed that gauze masks worn close to the nose collected moisture which reduced the efficiency of the mask. The efficiency of masks was improved by increasing the layers of gauze and making the mesh finer. Around 1920 some [7-10] recommended that masks should contain five or six layers of gauze, with a mesh of at least 44 x 40 threads per square inch.

By the late 1920's the use of surgical masks was widespread. Starting in the 1930's deflector-type masks were introduced [10-15]. Some authors [16,17] criticized deflector masks because they only deflected bacteria and air pollution was essentially the same as if no masks were worn. In 1958 Kiser and Hitchcock[19] developed an effective mask combining the deflection and filtration principles. Adams *et al*[20] developed a mask with high filtration efficiency that could be sterilized, and used repeatedly.

(*Continued on next page*)

*From the departments of surgery and bacteriology, University of Nebraska College of Medicine, Omaha, Nebr.

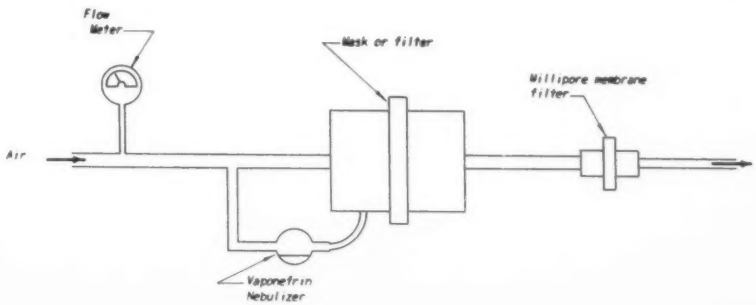


Fig. 2: Mechanical filter test.

Fig. 3: Sneeze with gauze mask.

Fig. 4: Sneeze with Surgical Mask No. 540.

An ideal surgical mask, according to Rooks[22] and Wulff[23], should:

1. EFFECTIVELY FILTER BACTERIA
2. Leak no air
3. Not hamper breathing
4. Be comfortable
5. Be compact.

While evaluating new types of surgical masks, we have found one that is effective and wearable; that is, it has an effective filter, it fits the face snugly, and it is breathable, comfortable and compact. Because it is made to be used only once, use of this mask saves the time and effort usually spent laundering and handling masks. Throughout the rest of this report we will refer to this mask as Surgical Mask #540** (Figure 1).

Procedure

Surgical Mask #540 has a highly efficient filter incorporated in a plastic shell that is shaped to fit the face and has an elastic band to hold it to the face. We have tested this mask for efficiency in filtering bacteria and for wearability.

We started out testing the efficiency of various masks for filtering out bacteria, using human subjects and agar plates. Like others[9,16,20,21,28] we found the results unreliable and unreproducible. We have since adopted a mechanical test modified from methods described by Allen[25], Guyton and Lense[26], and Wilson and Harrod[27]. This test measured the efficiency of a material for filtering out bacteria by forcing through it a stream of air containing an aerosol of bacteria. This was done in a closed system.

Figure 2 shows diagrammatically the system we used. The air supply was filtered and regulated by a flowmeter at 10 liters per minute. The air flow activated a nebulizer containing 5 ml. of a dilute culture of *Serratia marcescens*. Thus an aerosol of bacteria was directed into the main air stream. The air stream passed through the material to be tested and then through a Millipore† membrane filter. At the end of two minutes, the air valve was closed and the membrane filter was removed and placed in a Petri dish containing a nutrient agar. After incubation at 37° C. for 48 hours, bacterial counts were determined. Efficiency was expressed as:

$$\% \text{ Efficiency} = \frac{(\text{Control Counts}) - (\text{Test Counts})}{(\text{Control Counts})}$$

The test then was repeated for 30 minutes simulating clinical use over a period of time. Pressure drop across the test material also was measured to evaluate "breathability."

Using this method, we tested gauze masks taken at random from the operating room. Some had been laundered several times and some were new. Also, we tested the filter of Surgical Mask #540.

A sneeze test was done to show the efficiency of the gauze mask and Surgical Mask #540. Photographs were taken using stroboscopic light and a fast shutter speed. Photographs also were taken of the filter material with a constant light source. The photographs then were enlarged 25 times to show more detail of the filter material.

During the past year Surgical Mask #540 has been tested in use. Staff surgeons, residents, interns, medical students, nurses and student nurses have worn the mask in the operating room. They completed a report on each mask worn, evaluating fit, comfort, "breathability," warmth, air leak, visibility and "speakability." More than 1,000 masks were tested. Design and composition of the mask were modified according to the suggestions received from the reports.

Results

The results of our tests for efficiency of bacterial filtration of the ordinary gauze mask and of the filter of Surgical Mask #540 are shown in Table 1. The efficiency of the gauze mask was relatively poor – 40 percent when tested for two minutes. Furthermore, when the test was continued for 30

**Developed by Minnesota Mining and Manufacturing Co., St. Paul, Minn.

†Produced by Millipore Filter Corp., Bedford, Mass.

minutes, the efficiency fell to less than 10 percent. On the other hand, the filter of Surgical Mask #540 had an efficiency of 86 percent after a two-minute test, and it showed no reduction in efficiency after 30 minutes. This suggested that the efficiency of filtration of Surgical Mask #540 would remain high with use over a period of time.

Table 1. Mechanical Testing at the University of Nebraska College of Medicine Comparing Percent Efficiency of Surgical Mask #540 and Gauze Masks

	2 minutes	30 minutes
Surgical Mask #540 (25 tests)	86%	90%
Gauze Mask (7 tests)	40%	10%

Table 2. Mechanical Testing by Independent Group[24] Comparing Percent Efficiency of Surgical Mask #540 and Gauze Masks

	5 minutes	30 minutes
Surgical Mask #540 (10 tests)	90%	90%
Gauze Masks (10 tests)	35%	8%

The results obtained by an independent group[24] were similar to ours, as Table 2 shows. The results of the sneeze test are shown in Figures 3 and 4. These photographs need little description. The inefficiency of the gauze mask is obvious. No droplets were seen on the sneeze test with Surgical Mask #540.

Photographs of the filter material both magnified the same number of times are shown in Figures 5 and 6. No open spaces are present in the filter of Surgical Mask #540. However, many open spaces are present in the gauze filter material.

In clinical use Surgical Mask #540 fit snugly. It must be adjusted on the face until it is comfortable and leaks no air. The elastic band should not touch the ears. After making these adjustments most persons found the mask comfortable and had no difficulty with fogging of their eyeglasses.

Anything new usually requires adjustments. We suggest that each person wear this mask three or four times to become accustomed to it. Then a person can satisfactorily judge this mask based on the criteria for the ideal surgical mask. Most wearers during our tests were not conscious of having it on during an operation.

Discussion

We realize there are many factors in the prevention of sepsis. One of these is an effective surgical mask. Since 1920 there has not been a widespread improvement in surgical masking. Since that time the standard surgical gauze mask has been widely used. Our tests and the tests of others show that gauze masks provide poor protection for the patient and generate a false sense of security.

Better masks are being developed and tests for their efficiency are being improved. We should take advantage of these improvements now.

Surgical Mask #540 meets the major criteria for an adequate surgical mask. It has excellent efficiency for bacterial filtration, showing 86 to 90 percent efficiency in tests lasting from two to 30 minutes. The filter of the mask is held away from the nose and mouth and thereby prevents reduced efficiency of the filter from wetting.

Our staff found the mask light and comfortable in use. Although a few complained of excess warmth and difficulty in breathing, we believe this slight discomfort a small price to pay for excellent protection for the patient. The fit of the mask was excellent, allowing very little leak from the edges. We had few complaints from surgeons of their glasses fogging while using these masks, and we have had no difficulty in speaking to one another while wearing the masks. We have found this a problem with some of the other new masks.

The mask did not obscure the vision of the wearer. Finally, because it was used only once and discarded, its use eliminated the washing, handling and sterilization necessary with gauze masks.

Summary

We have tested a new surgical mask and found it efficient and practical. Surgical Mask #540 filters

(*Continued on next page*)

Fig. 5: Magnification of gauze mask filter.

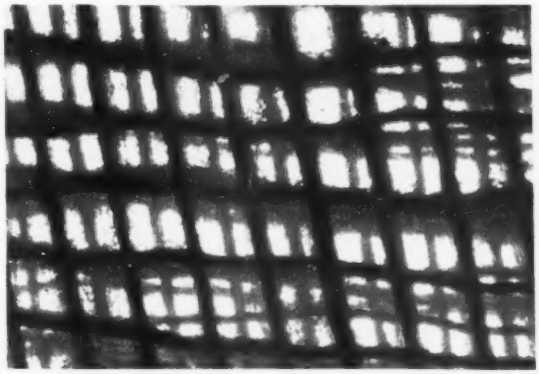
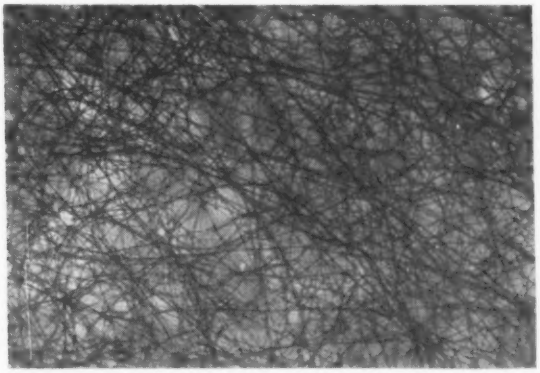


Fig. 6: Magnification of Surgical Mask No. 540 filter.



out bacteria efficiently, fits comfortably, and is light and compact. It does not leak air from the edges and does not interfere with vision or speech.

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Can Direct Vision Endoscopes Be Autoclaved?*

By Ralph G. Rigby, M.D., and Elaine Dedrickson Dyer, R.N.†

The problem of bringing about desired change is one of the important objectives in education. New information through research is one of the methods used to convince people that they should change.

Chemical-disinfection research evaluations recommend that only those items that cannot be sterilized by heat should be disinfected by chemical methods.[1,2,3,4,5] A survey of the literature reveals that there is no effective chemical solution which will sterilize instruments in 30 minutes. The fastest acting germicide is irritating to tissues and must, therefore, be rinsed meticulously from the instruments. Considering the many pitfalls and limitations in using germicides, it seems that a more reliable method should be found. Autoclaving is the most rapid and reliable method of destroying micro-organisms.

It is held that some hospitals prepare their direct vision endoscopes with chemical solutions because some of the manufacturers of endoscopic instruments recommend that their instruments not be autoclaved.

Knowledge of the limitations of disinfectants and the recommendations of the instrument manufacturers caused the writers much concern. A set of direct vision endoscopes contaminated with tuberculosis organisms from one surgical patient with active tuberculosis required sterilization and use on another patient. The tubercle bacillus is not a spore-former, but the waxy coat which surrounds it makes it difficult to destroy. It is considered midway between spores and vegetative bacteria in its resistance to destruction. Processes of preparation should, therefore, be geared to destroy spore-forming micro-organisms.

Because the greatest concern was felt for the safety of the patient, it was elected to autoclave the instruments in spite of the manufacturer's recommendation to the contrary. Careful examination of the instruments following the sterilizing revealed

*Reprinted with permission from *Diseases of the Chest*, June, 1960.

†Dr. Rigby is consultant in laryngology and broncho-esophagology, Veterans Hospital; associate professor of surgery (endoscopy), University of Utah Medical School, Salt Lake City. Miss Dyer is operating room supervisor, Veterans Hospital, Salt Lake City.

no visible damage to the instruments or their accessories. Subsequently, in situations resembling the above conditions, it was elected to sterilize the instruments with steam under pressure.

Sufficient investigation of the autoclaving method has been completed to lead one to believe that this method can be employed to prepare direct vision endoscopes with complete safety for the patient and with only a minimal amount of damage to the endoscopes.

In connection with a research project for a master's thesis in 1955, the following tests were made.[6] A representative sample of endoscopic instruments was chosen from the supply cupboard. Care was taken to choose those instruments that were not used often so that the experimental instruments could be kept separate during the research project. The actual instruments tested are listed in Chart 1. Each separate piece of equipment was identified with a tag. The autoclaving and drying times and any special remarks were recorded on the tag during the research autoclaving period.

These instruments were autoclaved 101 times at 250°F. at 20 pounds of pressure, a total of 41 hours and 49 minutes and dried for a total of 19 hours and 38 minutes. It was attempted to autoclave them 20 minutes and dry them 10 minutes each time. The drying was effected by leaving the instruments in the autoclave with the steam in the jacket turned on and the autoclave door open slightly. The instruments and bulbs were examined and tested after each autoclaving period for the first 51 tests. They were examined and tested following every two autoclaving periods during the second fifty autoclaving tests.

The instruments were examined and tested for:

1. Evidence of damage to the surface of the metals—discoloration or etching.

2. Evidence of damage to the soldered joints.

3. Evidence of damage to the rubber cord—stickiness of rubber, separation between the rubber-metal joints, corrosion on light terminals and damage to the terminal collars.

4. Evidence of damage to the light carrier terminals and bulbs—the light bulbs were checked to see if they would carry current and light. No attempt was made to determine how long the bulbs would burn.

5. The atomizers were examined to determine if they would spray. It was felt that any internal damage that the instrument sustained would prevent them from spraying.

No attempt was made to clean the instruments until the research had been completed. The bronchalloy metal was easily returned to its original appearance. The brass metal was cleaned with metal polish and proved more difficult to return to its original appearance. There was no evidence of etching on the surface of the metal. A section of the brass endoscopes and atomizers was left unpolished so that interested people could examine the effect of the autoclaving periods and contrast the polished area with the discolored area and also with the surface of the instruments that had never been autoclaved.

The effects of the autoclaving are summarized in Charts 1 and 2.

CHART 1

The following instruments were used in the research project and were autoclaved 101 times at 250° F. and 20 pounds of pressure. A total of 41 hours and 49 minutes and dried for a total of 19 hours and 38 minutes. The drying was effected by leaving the instruments in the autoclave with the steam in the jacket turned on and the autoclave door opened slightly. The instruments were autoclaved in an open instrument tray.

No attempt was made to clean the instruments until the research was completed.

Some of the instruments were constructed from brass metal and some were made from bronchalloy metal. The following results were obtained:

INSTRUMENT	EFFECT OF 101 AUTOCLAVINGS	EFFECT OF CLEANING
1. Esophagoscope #1 9 mm. x 53 cm. (brass)	Markedly discolored, but the surface remained smooth.	Discoloration was removed with metal polish.
2. Esophagoscope #2 9 mm. x 53 cm. (brass)	Same as above.	Same as above.
3. Esophagoscope #3 7 mm. x 30 cm. (bronchalloy)	No discoloration of metal. Surface remained smooth and bright, but had a few water marks.	The water marks were readily removed with a water - moistened cloth.
4. Esophagoscope #4 7 mm. x 30 cm. (bronchalloy)	Same as above.	Same as above
5. Light Carriers (bronchalloy)	No evidence of discoloration. Surface remained smooth and bright.	None required, except to the contact terminal on occasion. (See observations).
Carrier #A (with E.S.I. lamp in place)	Lamp burned out on 95th autoclaving period. A total of 38 hours and 59 minutes autoclaving time and 18 hours and 58 minutes drying time. The replaced lamp lasted through the rest of the project.	
Carrier #B (with E.S.I. lamp out of carrier)	Lamp burned out on seventh autoclaving period. A total of 2 hours and 59 minutes autoclaving time and two hours and five minutes drying time. Replaced lamp lasted through the project.	
Carrier #C (with Pilling lamp in place)	Lamp burned out on 87th autoclaving period. A total of 35 hours and 54 minutes autoclaving time and 17 hours and 48 minutes drying time. The replaced lamp lasted through the rest of the project.	
Carrier #D (with Pilling lamp out of carrier)	Lamp burned out on 61st autoclaving period. A total of 25 hours and 39 minutes autoclaving time and 13 hours and 38 minutes drying time. The replaced lamp lasted through the rest of the project.	

(Continued on next page)

6. Forceps globular objects 50 cm. (bronchalloy)	The bronchalloy parts unaffected. The blue tips showed a spotty color change and what appeared to be a small amount of corrosion. The surface of the blue tips remained smooth.	Corrosion easily removed with a water - moistened cloth.
7. Forceps globular objects 30 cm. (bronchalloy)	Showed some color change, but not as much as the above instrument.	Same as above.
8. Atomizer, Clerf 50 cm. (brass)	Surface discolored but remained smooth. Atomizer always sprayed, when tested, during the research project.	Discoloration removed with metal polish.
9. Atomizer, Clerf 30 cm. (brass)	Same as above. On the 51st autoclaving period, the glass-metal joint on the spray bottle separated.	Same as above.
10. Mirror, laryngeal angular, boilable Size #1 (chrome plate)	No discoloration of metal. Some water spots were present.	Water spots removed with a water - moistened cloth.
11. Mirror laryngeal angular, boilable Size #00 (chrome plate)	Same as above.	Same as above.
12. Cord, Jackson battery #A black rubber with two black terminal sleeves	No apparent damage.	Required no cleaning.
#B black rubber	No apparent damage.	Same as above.
#C brown rubber cord, with one red and one black terminal sleeve	No apparent damage to the rubber, however, the *red* terminal sleeve developed small cracks.	Same as above.
#D brown rubber cord, with one red and one black terminal sleeve	Same as above.	Same as above.

CHART 2

OBSERVATION OF INSTRUMENTS FOLLOWING 101 AUTOCLAVING PERIODS

1. The bronchalloy instruments showed no evidence of discoloration. There were a few water marks left where droplets of steam evaporated during the drying process. These were easily removed with a water- moistened cloth.

2. The brass instruments were markedly discolored, but the surface remained smooth and there was no other apparent damage. This discoloration was removed with metal polish. After cleaning, they appeared to be the same as those instruments that had never been autoclaved.

3. The lighting systems revealed no evidence of damage other than those noted in Chart 1. The electrical terminals on the carriers, lamps, and cords seemed to be less affected by the number of autoclavings than by the nature of the load that was autoclaved just prior to them. When vaseline was autoclaved preceding the endoscopes, all of the terminals required cleaning with the Inperatori Cleaner.

4. The bronchoscopic forceps showed no evidence of being damaged except that the blue tips on the forceps showed spotty discoloration and a small amount of corrosion. The surface of the tip remained smooth. The corrosion was removed with a moistened cloth.

5. The Clerf Atomizers worked well throughout the research. The brass discolored as noted above. On the 51st autoclaving, one of the spray bottles separated between the glass-metal joint.

6. The cost of a Pilling-made Jackson Lamp is $2.15 . . . the same model manufactured by the E.S.I. Company is $1.48. The Pilling-made Clerf Bottle costs $1.75. (These prices were obtained from our supply department). Two Pilling lamps burned out. Two E.S.I. lamps burned out. One Clerf Bottle separated during the 101 autoclaving periods. This is a total cost of $9.01, or slightly less than $.09 per autoclaving period.

These data were circulated to 171 Veterans Administration hospitals in the United States. Ninety of the hospitals reported they were autoclaving all or part of their endoscopic equipment prior to receiving our research results. Forty-one of the hospitals reported they were using chemicals to prepare their instruments. Fourteen reported that endoscopic examinations were not performed in their surgery. Twenty-six failed to return the questionnaire. Twenty of the 41 hospitals using chemicals to prepare their endoscopes reported they switched to the autoclaving process after receiving our research results. Both of the hospitals where the authors work have used the autoclaving process for the three years that have elapsed since the original research project.

Approximately 522 endoscopic examinations have been completed at one hospital and 252 have been completed at the other, a total of 774 autoclaving periods, under our personal supervision.

The instruments present no further evidence of damage. It appears that the minor changes that occur in the instruments during the first few autoclaving periods, and as reported in the original research results, are all that can be expected to take place. The cost of instrument upkeep is minimal and the patient is safe from cross-contamination.

Summary

The autoclaving method has been demonstrated to be effective and economical for preparing direct vision endoscopic instruments.

Bronchalloy is superior to brass when the autoclaving method is employed.

Black rubber cords appear to be superior to brown rubber cords because of the stronger black terminal collars.

There seems to be a weakness where cement is used between metal and glass.

From our experience, autoclaving is the method of choice for preparing direct vision endoscopes.

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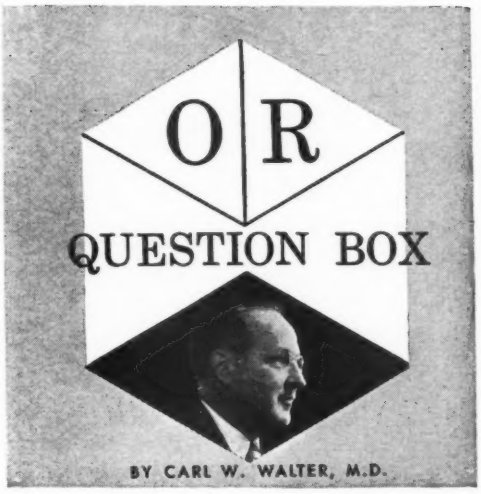


Assisted by Dorothy W. Errera, R.N.

Q. Is a brush necessary for scrubbing the operative area?

A. The need for mechanical cleaning varies with the patient. The average individual's bathing habits remove most soil. But others, particularly the elderly or underprivileged, have a major problem in skin hygiene. In some hospitals, patients receive a supervised bath or shower on admission. The patient who is prepared for elective surgery with instructions for washing the operative site daily will come in for surgery with clean, disinfected skin.

When imbedded dirt is a problem in a patient, it should be attacked whenever possible preoperatively with detergents, bleaching agents, abrasive cleaners and fat solvents.

One surgical crisis depends on the use of a sterile brush for cleaning. This is the preparation of a traumatic wound or open fracture for excision and debridement. The injured part is positioned over an irrigating pan, and an iodophor or watery mixture of calcium hypochlorite is applied to the wound edges. The area is scrubbed with a sterile normal saline.

Q. Our surgeons often bring their own instruments to the operating room, saying they are "sterile," and it is a running battle to get them to agree to let us sterilize the instruments again before use. Do you think we are wrong to insist?

A. Although the instrument may have been originally properly wrapped and sterilized, one must always consider the question of possible contamination from improper handling in the interim before use. There is also the possibility that the outer wrapper may have been exposed to contamination during transportation. Under these circumstances, it is wisest to insist on preoperative sterilization of all instruments immediately before use.

On the other hand, if your colleague in another hospital is competent and she has wrapped and sterilized an instrument well and placed it in a clean outer wrapper, and the surgeon has delivered it promptly to you for immediate use in a case, there would be no reason to assume that it was unsafe.

Q. Is the unit used for cleaning the hands in the film on hospital infections a portable handwashing facility?

A. The unit shown in the film, "Hospital Sepsis: A Communicable Disease," is a freestanding, floor model liquid soap dispenser. In this instance, it is used to dispense a germicide for disinfecting the skin of the hands. This technic is preferred to the hand-basin technic because it eliminates problems of dilution and inactivation of the germicide by soil.

Q. What is used for cleaning the shoe soles in the film?

A. The shoe cleaner is an ordinary polystyrene floor mat cut to fit a plain metal or enamel tray. A detergent-germicide solution is poured on the mat at regular intervals throughout the day. When it is grossly soiled, it is discarded and a fresh mat is put in place.

Q. How do you suggest handling linen from a case in which the gas bacillus has been a contaminant?

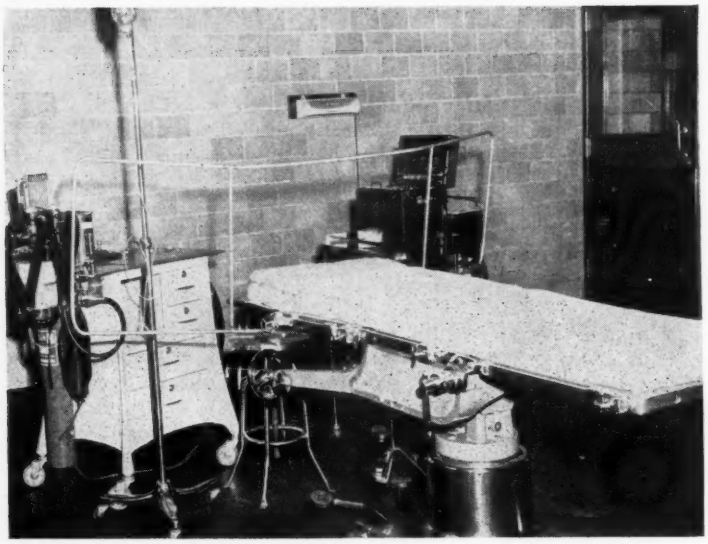
A. Linen is gathered by the scrub nurse in an *intact* laundry bag. Care is taken to assure that damp pieces are wrapped deep in bundles of dry pieces, so that there will be no seepage.

The bag should go directly to the laundry for fairly prompt treatment. The contents and bag are dumped directly into the wash wheel. The usual wash cycle with water at 180° F. is adequate for disinfection.

If a commercial laundry must be relied upon, and consequently there is no direct control of laundering technics and pick-up may be delayed, the bag and contents should be exposed to saturated steam at 250° F. for 30 minutes.

The hazard of disease transmission is in letting blood and pus in linens and dressings dry. Spores are then freed into the environment with motion and activity.

The usual technic of cleaning after any surgical case is adequate for this instance, provided it includes: prompt terminal sterilization in heat of contaminated instruments and heat-stable equipment; disposal of non-heat-stable articles; careful collection and efficient laundering of linens; bagging of soiled sponges in waterproof containers for incineration, and good technics of floor disinfection. Walls need no more than routine housekeeping unless there is evidence of gross soiling. Finally, the room is *not* quarantined.



An Improved O. R Screen

By Dean H. Morrow, M.D.**

The improved screen in place on the operating table.

The progressive advances of anesthesia and surgery are leading to more extensive and more detailed kinds of operative procedures. Many of these surgical undertakings, of necessity, require the presence of additional personnel and equipment in the operating room. The need for maintaining the necessary aseptic barrier between the operating team and the anesthesiologist under these crowded conditions prompted a modification of the standard Kocher ether screen for use in major cases at the Indiana University Medical Center Hospitals.

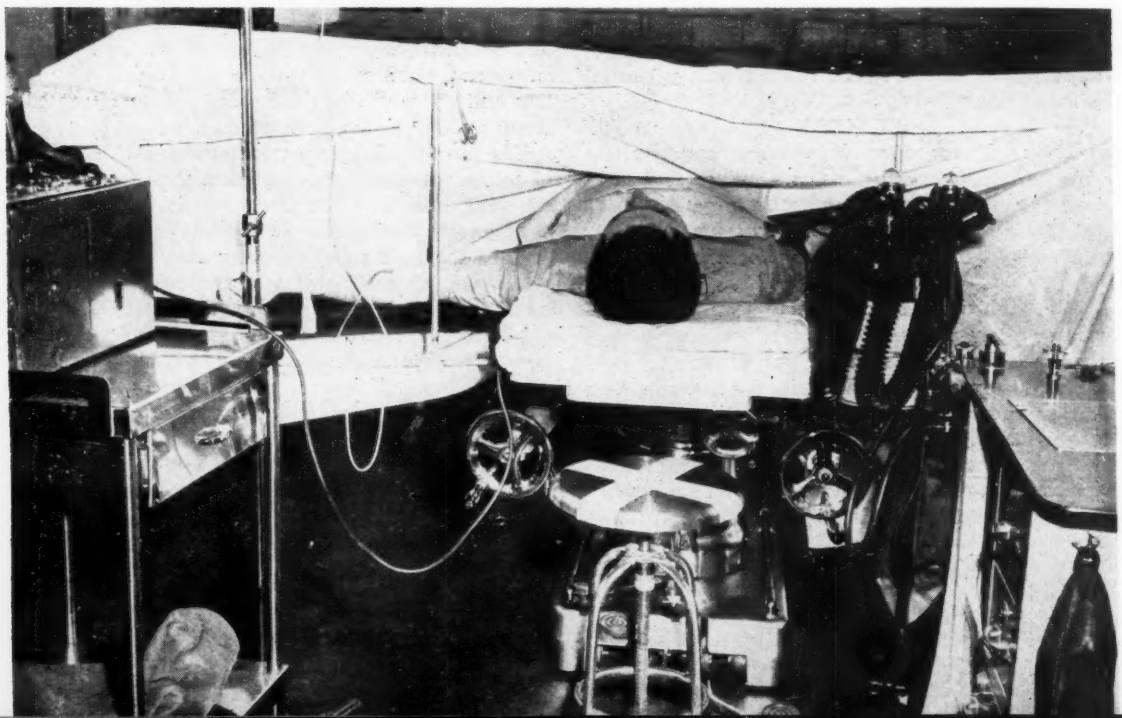
The improved screen, measuring 60 inches in length and 22 inches in height, is made from ½-inch aluminum rod. It fits the standard ring adapters supplied with the operating tables. The illustrations show the screen attached to the operating table, and the advantages of the screen with drapes in place and the patient ready for surgery.

It has been found to be quite pleasing to the surgeon in allowing all recording equipment, intravenous stands, and the anesthetic machine to be draped completely out of the operating field. It is quite acceptable to the anesthesiologist, since it gives ready access to the patient's extended arms and good support to the upper arm with the patient in the lateral position. The size of the screen discourages observers from assuming positions too close to the wound and sterile field. Because of its rigid yet light-weight construction, it gives reliable support for surgical drapes and may be easily handled by the nursing staff.

*This article is based upon material which appeared originally in the May-June, 1959, issue of *Anesthesiology*. The editor of *Anesthesiology* has granted permission for publication of the article and the accompanying illustrations.

**Dr. Morrow, formerly at the Indiana University Medical Center Hospitals, Indianapolis, is now with the department of anesthesiology, National Institutes of Health, Bethesda, Md.

The screen with drapes in place and the patient ready for surgery



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Certain it is that constant bladder drainage and infection have been an inseparable duo. But now it is known that aseptic technic is instrumental in eliminating these urinary tract infections.

Three points in the system are considered portals of entry for bacteria: the urethral meatus; the connecting tube; and the distal end of the drainage tube.

Asepsis is rigid. The drainage equipment – bottle, stopper, adapter, and tubing – are sterilized in saturated steam at 250° F. for 30 minutes. The meatus and surrounding tissue are washed with hexachlorophene and 1:1000 aqueous benzalkonium chloride. The catheter is lubricated with sterile jelly. The distal urethra is irrigated with the same disinfecting solution. Once daily thereafter in males, and two or three times daily in females, the area about the meatus and catheter is cleaned with 1:1000 aqueous benzalkonium chloride. A gauze pad saturated with the germicide is usually taped to the penis and changed daily.

When the apparatus is disconnected for any purpose the connection between catheter and drainage tube is treated as a sterile field. The junction is disinfected with 70 percent ethyl alcohol before the equipment is disassembled. The parts are wiped with sterile sponges saturated with alcohol. The irrigation is done with aseptic technic. If the catheter is advertently contaminated or if there is any question of contamination of any part of the set, a fresh, sterile ensemble is installed.

To prevent contamination from bacteria travelling upstream, the distal end of the drainage tube is never allowed to contact the urine; it is never handled with bare hands and is not allowed to rest on the floor. Collection flasks are emptied and replaced at frequent intervals so that urine never reaches the level of the end of the tube.

Does it work? It would appear so.

Of the 51 patients treated with care, 41 had sterile urine cultures when the catheters were removed. In the ten patients who had positive cultures, a break in technic could be documented in seven instances: three were dressed with poor technic; two were contaminated when catheter and adapter were handled carelessly and two became contaminated when drainage bottles overflowed.

Urine cultures in this category of patient have been almost consistently positive despite prophylactic antibiotic therapy. So, it would appear that the urinary tract can be maintained in a sterile condition by treating the meatus and drainage system with the respect of aseptic technics.

First Choice
of the First Hospitals
Since 1909

A Stitch in Time

"A stitch in Time saves nine"
Is a motto we always hear.
"A Diack Control used every time"
Has a meaning just as clear!

Get back to first principles of cleanliness and sterility and you will *control the staph problem.*

SMITH & UNDERWOOD
Royal Oak, Michigan . . . . Sole manufacturers of Diack Controls and Inform Controls

TIME-TRIED Diack Controls

For further information see postcard opposite page 138.

How DennisonWraps for Autoclaved supplies achieve

Cost Reductions in Central Service

The economies **provided by reusable, double-creped paper DennisonWraps are important to you. This is illustrated by the answers to the following questions which have been asked by CS and OR Supervisors.**

Q. *How can I prove whether DennisonWraps would have a lower cost per use than muslin in my hospital?*

A. It's all a matter of accurate record-keeping. The cost of each pre-cut sheet of DennisonWraps is a known figure. You can easily keep track of each use by numbering a corner of the sheet. Then you simply divide the number of uses (between 6 and 10 according to present users) into your sheet cost.

Determining the cost per use of muslin, however, isn't so simple. In addition to the original cost of material, there are many continuing costs; some obvious, others hidden.

First, there's the labor of cutting and sewing *plus* thread costs and overhead costs of the sewing room, including cost and depreciation of sewing machines.

Laundering now adds its expense. Some hospitals wash muslin before and after it is made into wrappers. A double cost! Laundering after every use is a costly necessity . . . and don't forget the cost of transportation to and from the laundry.

Repair costs of muslin, including transportation to and from the sewing room plus another trip through the laundry, must now be added.

Inspection costs, you'll find, are double those of DennisonWraps because each muslin wrapper must be examined on both sides for safety's sake.

When all is said and done, you'll find that the costs per use of muslin wrappers will be two to five times that of DennisonWraps.

Q. *Why do you say that DennisonWraps effect savings by eliminating laundry bottlenecks?*

A. The most costly autoclave wrapper in the world is the one which is not on hand when needed. Its absence causes a hold-up of your entire production and wastes your labor time. In some hospitals the laundry is a mile away. So, your aides spend their time waiting or walking instead of working.

On the other hand, with a carton of ready-to-use DennisonWraps close at hand, and another carton in reserve nearby, your aides are always working . . . never walking or waiting.

Q. *Isn't it more expensive to buy and store so many different sizes of DennisonWraps?*

A. No! The very fact that you have the right size for every package is an economy. There's no waste of labor time tucking in all the unneeded inches and extra bulk of muslin wrappers.

Furthermore, the purchasing time (and costs) for pre-cut sizes is far less than that required to figure out how much muslin will make how many wrappers of what size.

Storage costs are also greatly reduced because you can store at least three times as many DennisonWraps in the space required for muslin wrappers in a given area. This means that you can keep adequate supplies at point of use to eliminate waiting time.

Q. *A torn paper wrap cannot be mended as muslin can. Doesn't this fact alone show that muslin is more economical?*

A. Not at all! Any torn sheet of DennisonWraps has already given you the cost-cutting benefits of its lower cost per use. Moreover, that torn sheet is still usable. Just cut it into smaller pieces for use as bottle or test tube caps or as separators between items. Remember, mending muslin is extremely expensive whereas you can use every scrap of your DennisonWraps.

Q. *Is there an inexpensive way to introduce DennisonWraps into our hospital?*

A. It costs nothing to get started! A free hospital evaluation kit contains generous quantities of DennisonWraps in pre-cut sheets, glove wicks, envelopes and cases . . . plus documentary proof that DennisonWraps will increase the safety, efficiency and economy of your autoclaving procedures. Ask your local hospital supply house . . . or address your request to Dennison Manufacturing Co., Dept. N-171, Framingham, Mass.

FOR ECONOMY'S SAKE
insist on reusable

DennisonWraps

. . . identified by their exclusive hygienic imprint.

Central Supply

Proper Positioning Of Supplies in the Autoclave

By Dorothy W. Errera, R.N.

Proper positioning of supplies in the autoclave is essential to effective sterilization. Its importance is frequently emphasized by authorities on sterilization.

As a service to our readers, we are reprinting here an excellent article on this subject, which originally appeared in the September, 1956, issue of HOSPITAL TOPICS and is also included in the CENTRAL SUPPLY YEARBOOK, Volume II. The principles which it presents have not changed, and we believe the material is well worth reviewing, particularly for the benefit of new personnel in the field.—THE EDITORS.

The sterilizer operator needs an active imagination and solid grasp of a few fundamentals to load a sterilizer carriage in such a way that all the supplies will be sterilized.

Steam sterilization is a dependable, predictable process – an excellent method of destroying bacteria which demands but a few conditions for effective performance.

Two factors are necessary for sterilization by steam – heat and moisture – and both of these are provided by the steam itself. Steam as it contacts the cold surfaces of a load condenses, and in doing so wets that surface and heats it – much the same way the steam from a boiling kettle will condense on the cold kitchen wall, leaving it wet. The sterilizer operator must make it possible for this process to go on on all surfaces of every article to be sterilized.

Steam destroys bacteria by direct contact only. Successful bacteriologic action depends upon free access of steam to all surfaces in sufficient quantity to heat and moisten. The natural barrier to this process in the sterilizer is air – air in cans, air in tubes, air in the sterilizer.

Air and steam do not mix. Air is heavier than steam and pools in any hollow possible. Clearance of air from the sterilizer is accomplished by gravity through the air and condensate discharge line (see Figure 1 on page 98). The exit is the small, screened hole located in the bottom front of the sterilizer. The exit is blocked when that screen is full of dirt and bits of rubber bands, paper bags, etc. The screen should be unscrewed from its position and cleaned at regular and frequent intervals.

Air will also run out from jars, cans, bottles, or other hollow vessels in the sterilizer, if the means for its escape are provided.

A useful imaginary check for the sterilizer operator is one in which she mentally substitutes water for air. If she can visualize the articles on the sterilizer carriage filled with water and will position them so that the water can only run out, she can be sure that air will also escape. By providing this horizontal path for the escape of air, she makes it possible for steam to contact the inner surfaces of these hollow vessels.

When it is impractical to sterilize a vessel in anything but an upright position, or when air clearance is difficult, as, for instance, from the lumen of a hollow needle or the inside of an Asepto bulb, another feature of steam sterilization can be used to make sterility of that remote surface possible.

This is the fact that when 1 cc. of water is heated to the boiling point, 865 cc. of steam is created (see Figure 2, page 98). This information is useful for the operator faced with the problem of sterilizing syringe canisters which cannot be placed on their sides, or flasks which cannot be inverted. One cc. of water left inside that canister or flask will turn to 865 cc. of steam and force the air from

(Continued on next page)

Illustrations for this article are from *Aseptic Treatment of Wounds* by C. W. Walter, M.D. New York: The MacMillan Co., 1948.

THERMOMETRIC CONTROL OF STERILIZATION

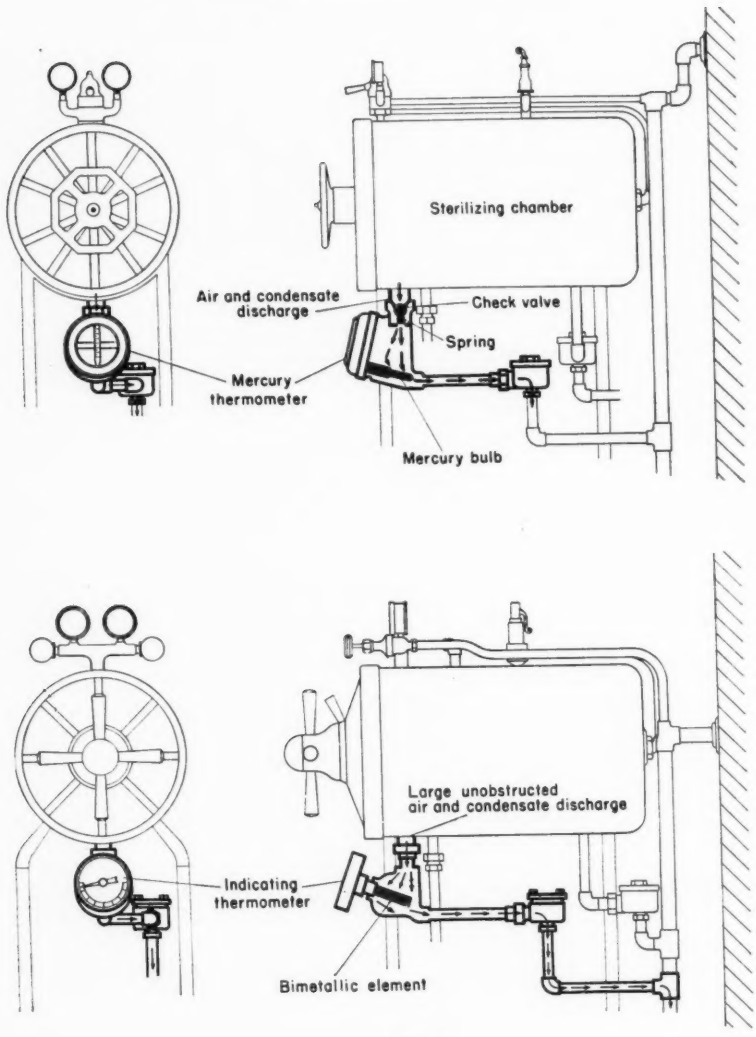

Fig. 1

QUANTITATIVE ASPECTS OF STEAM STERILIZATION

Fig. 2

the can or flask so that the inner surface is exposed to saturated steam.

Similarly, when suction tubing, Asepto bulbs, catheters, or needles are flushed with distilled water immediately before sterilization, a film of moisture is left which is heated and turned to steam to force air out.

Why distilled water?

Because tap water in most localities is hard – that is, it contains mineral salts which accumulate as a dry, crusty layer.

These are examples of steam exerting a surface effect – contacting a cold surface, condensing, wetting, and heating.

This same action goes on when steam must penetrate a porous object to reach its contents. It heats and wets from the outer permeable surface through to the center. What steam will penetrate may well be answered by the question – what will water soak through? If water will run through a material, it is reasonable to say that steam will also get through at a rate sufficient to sterilize the contents.

The sterilizer operator can evaluate her sterilizing wrappers by simply making a sack of one, filling it with water, and watching the rate at which the water soaks through. It must not only be permeable – that is, let steam pass through – but must be enough so that penetration is accomplished in the time allotted for the sterilizing cycle. Waterproof paper, waterproof duck, and other mate-

rials made to keep water out will most certainly not let steam in rapidly enough to be effective.

Even with permeable wrappers and proper positioning of supplies, sterilization can be frustrated by loading – that is, literally LOADING a sterilizer carriage: Carriages so densely packed that force is needed to close the sterilizer door deliver unsterile supplies. Supplies packed under the weight of the load are tightly compressed, trap air, choke channels of penetration, and escape contact with steam.

An open-shelved sterilizer carriage (Figure 3, this page) guards against overloading, because tight packing is impossible – inasmuch as anything that is not free-standing simply falls off.

Large packs of dry goods are problems in penetration and heating. The size should be limited to that which has been studied for heating and penetration times. The contents should be arranged loosely and in such a way that the kit is actually several small kits. This makes for quicker heating and penetration.

A large, heavy laparotomy sheet, loosely rolled and placed in the center of the pack as two upright cylinders, provides a port of entry for steam flowing into the various segments of the kit (see Figure 4). On the other hand, the same large, heavy laparotomy sheet folded into a rock-like handkerchief is difficult to penetrate and effectively blocks steam on its way through the kit.

The sterilizer operator should survey the sterilizer load critically with these few facts in mind. She should picture the possibilities for free exchange of air and steam, imagine steam contacting all surfaces to be sterilized, and position dressing cans, suture jars, test tubes, and so forth on their sides with lids removed. It makes no difference whether they are oriented to the back, front or side of the sterilizer – the concern is for that horizontal path for the escape of air.

Tightly nested basins should be repacked, separated by a towel or sponge so that steam can reach all surfaces. Instruments should be sterilized unlatched – not in an untidy, unwieldy, tangled mess, but merely unlocked and arranged on instrument hooks so that steam can reach the remotest parts of boxes and catches.

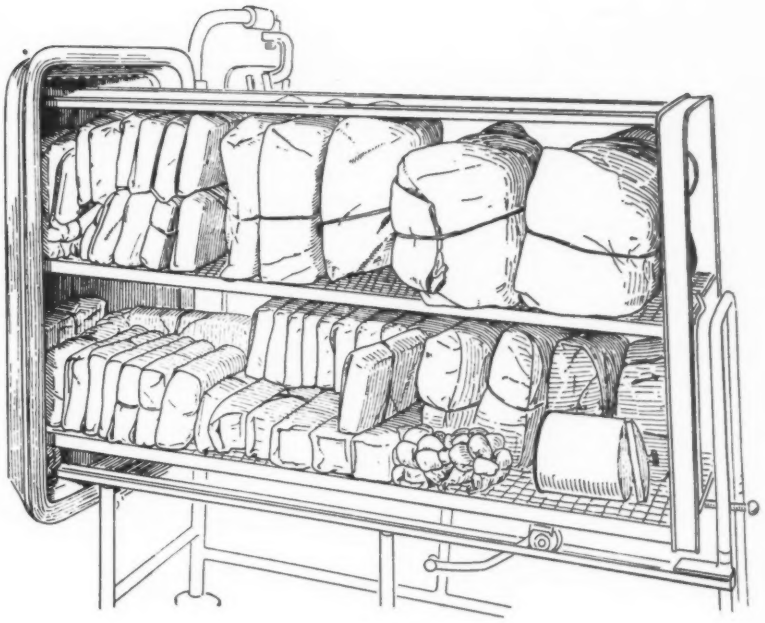

Fig. 3

ASSEMBLING SUPPLIES

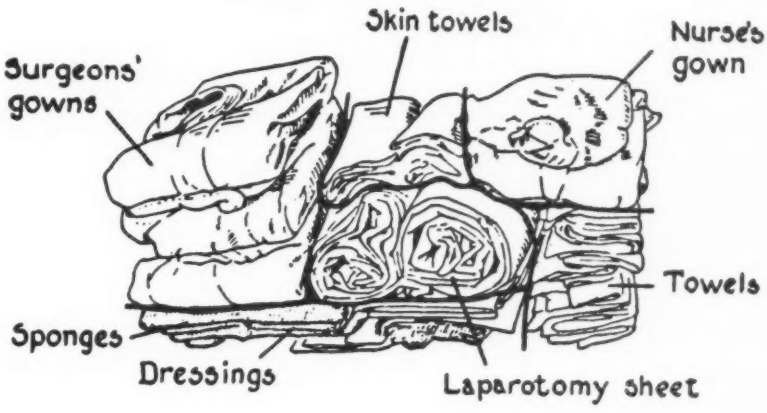

Fig. 4

Rubber gloves challenge attention to detail. In the sterilizer, there is only one position in which they can be sterilized – that is, horizontally with the thumbs uppermost. Any modification creates conditions for incomplete sterilization.

If they are sterilized in piles, the bottom packages are compressed and escape contact with steam; if they are sterilized in a vertical position with the fingers down, the whole gloves trap air which can never run out.

If they are sterilized in a vertical position with the fingers up, the inner surfaces are exposed to dry heat, which requires a longer time for sterilization. As steam enters the sterilizer, it contacts the outer surface of the glove first and heats and wets it. By the time steam seeps into the glove, it meets a heated surface and cannot condense.

In Figure 5 (page 100), the fish

(Continued on next page)

tank represents a steam sterilizer. The water filling the tank represents air in the sterilizer. When the cork is removed from the discharge line, the water runs out. It obviously pools forever in the upright dressing can and capped flask; it clears but only tardily from the inverted suture jar and dressing drum (represented by the Petri dish with holes placed to simulate the openings in a dressing drum). It runs out quickly from the can positioned on its side, uncovered.

Steam will destroy all bacterial life in 15 minutes at 250° F. It will do so consistently, efficiently and economically if given the opportunity to reach all the material it is expected to sterilize. This simple need is met by:

(1) Proper positioning to allow for an escape of air

(2) Avoiding tightly fitting surfaces

(3) Using permeable wrappers

(4) Avoiding overloading and dense packing of the sterilizer

(5) Providing the moisture necessary to create steam in those situations in which penetration or gravity clearance is impossible.

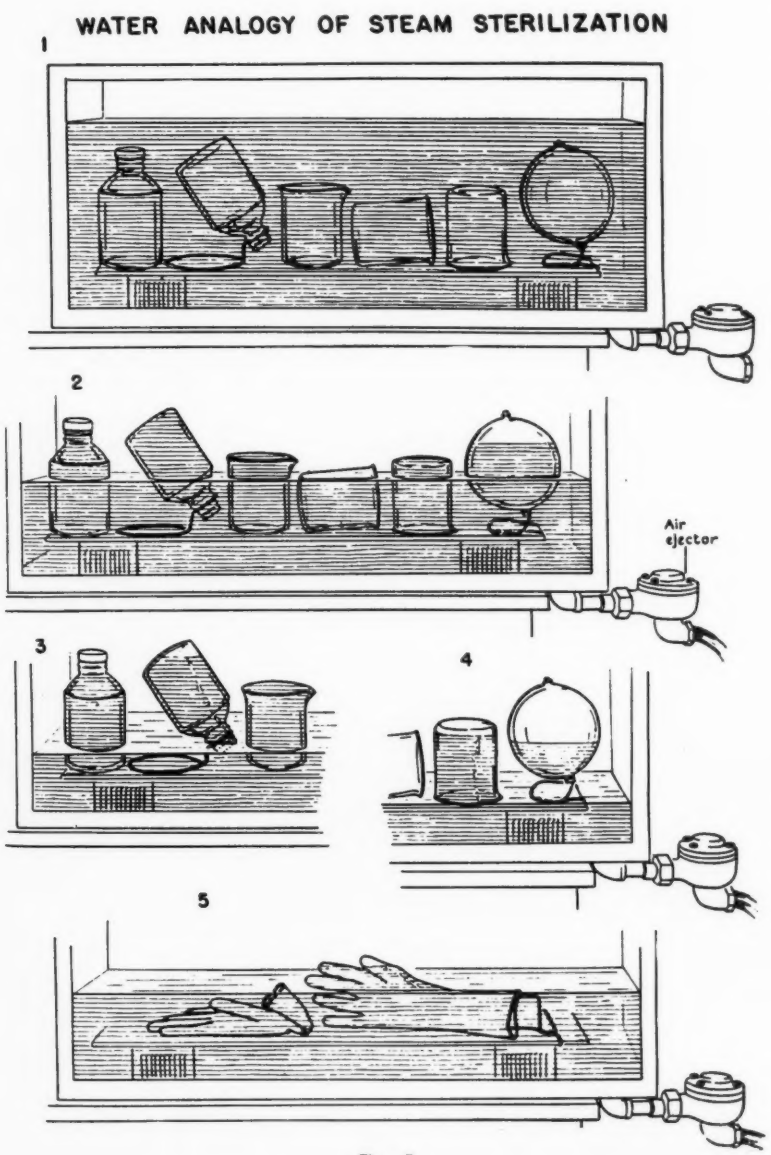

Fig. 5

ISC Offers Housekeeping Course

Industrial Sanitation Counselors, Louisville, Ky., inaugurates the first of its series of supervisory training programs for the hospital housekeeping field early in January.

Open on a first-come basis to administrators, assistant administrators, executive and assistant housekeepers, purchasing agents, and others, the course is planned strictly from the hospital housekeeping point of view and will include much of the same general material on work standards which was presented in ISC's first industrial training program.

Total charges per participant will be $600 for the two-week course, not including travel and subsistence expenses. ISC will assist in arranging accommodations.

The enrollment is limited to 20 students representing different hospitals.

Arthritis Victims On "Sucker" Lists, GP Warns

Arthritis victims are perhaps the most exploited group in the health field today, according to a recent issue of *GP*.

Many of the 11 million people so afflicted are on "sucker" lists inducing them to rub on liniments, swallow pills, follow useless diets, sit in vibrating chairs, read worthless books, spend money needlessly in "uranitoriums" and at various "health resorts," and undermine their health and pocketbooks with other bizarre devices.

In the meantime the thousands of "arthritis promoters" get rich—about a quarter billion dollars worth a year—and the arthritics get worse. Delay in treating arthritis and rheumatism by scientifically approved methods can result in crippling. And some "treaments" are actually dangerous in that they encourage exercise of joints that should be immobilized.

Arthritis is probably the most cruelly disabling of the chronic diseases, and one for which there is no "wonder drug," says *GP*. This is the reason that the arthritis promoters, with their promises of fast and permanent relief, find a susceptible audience.

Pediatrics

The Training School for Mentally Retarded Children . . . Brilliant Mind, Compassionate Heart

Part I

By Ellen L. Davis

The soil at Vineland, N.J., home of The Training School for the mentally retarded, is richly fertile. Eager for the seed, it is unstinting in nourishing growth, and bountiful in harvest. Most precious, and most patiently tended, of the seed planted there are ideas – thoughts, hopes, and experiments which in maturity help in understanding and alleviating those who will never mature mentally . . . the world's forever-children, whom famed novelist Pearl Buck calls "the innocent."

The impact of the research done at The Training School has been enormous, with the concentric waves of knowledge reaching the remotest foreign shores still vigorous enough to wash away old prejudices and theories and prepare the soil for new seed. It has shattered time-honored precepts with such thunderous repercussions that the fields of medicine, psychiatry and psychology have been shocked into uneasy silence. Yet always, following the first wave, has come the second—the one bringing to the professionals new concepts, new proofs, new stimulations and new challenges.

Thousands of words have been written about The Training School in a dozen languages. Yet it had its beginnings in just one word, "vision," the goading, exhilarating, driving and passionate possession of the school's founder, the Rev. S. Olin Garrison.

Its phrase, "Happiness first . . . all else follows,"

The classification committee, made up of the superintendent and department heads, meets for an entire afternoon each week to discuss individual children's problems and progress and revise programs when indicated. At the head of the table, facing the camera, is Clifford Lockyer, superintendent. In the left foreground is Alice Morrison Nash, educational consultant, who has been associated with the school for 60 years.

The responsibilities of the director of one of the world's foremost schools for mentally retarded children are heavy and complex. The rewards, made up of moments, are best expressed in this look of mutual affection and trust passing between Dr. Walter Jacob, director of The Training School, and one of its young boys.

has been studied and copied the world over. Its own concept of itself, basically unchanged in over 70 years, was expressed by Prof. Earl Barnes, Philadelphia educator, in less than 50 words: . . . "Vineland is a human laboratory and a garden where unfortunate children are to be cared for, protected and loved while they unconsciously whisper to us, syllable by syllable, the secret of the soul's growth. It may well be that the most ignorant . . . shall teach us the most."

The Rev. Mr. Garrison was the son of Stephen Garrison, a member of the New Jersey legislature, who in 1845 attempted to secure estabishment by the state of an institution for the care of what were then called "feeble-minded" children. He failed, but his effort fanned in his son the spark that was to burn as an unquenchable flame throughout his brief lifetime. Leaving his church in Philadelphia, Mr. Garrison came to Millville, N.J., in September, 1887, and opened his own home to care for several feeble-minded chidren.

Demands for entry into his small school were immediate, and the minister became a familiar figure as he rode through the countryside on horseback seeking support for the venture. In Vineland, B. D. Maxham offered his own home and 40 acres of land for $6,000 in cash and an annuity of $300 to be paid for life. Mr. Garrison appealed to the Vineland Board of Trade for $2,000, pledging location of the school there if the amount were contributed. It was raised.

Five boys and two girls moved into the Maxham home with the Garrison family in March, 1888, and two months later, established as a private institution, it was formally opened as the New Jersey Home for the Education and Care of Feeble-Minded Children. By the close of the year, the enrollment was 40 boys and 15 girls.

In 1889, two cottages and facilities for water were provided. A Board of Lady Visitors was organized to meet periodically at the school and visit with the children. In 1893, the name was changed to the New Jersey Training School for Feeble-Minded Children. Enrollment was over 200, with many children coming from neighboring states, and additional curriculum was being added to the education department.

Early in 1902, several interested professional men got together to form the Feeble-Minded Club, and by their very existence triggered the most dedicated, impressive program of research ever established for the study of mental retardation. Gas had been introduced, more and more children were being trained vocationally through farming, and the plant was valued at $70,000.

It was during these years that Garrison's personal vision became apparent to less penetrating sight—in a separate community, off in marginal land, where mentally retarded could live in a world of their own, suited to their needs and capabilities; where they could leave their homes in the morning to learn or to work, returning at evening to the warm understanding of family life guided by their cottage fathers and mothers. The cottage plan, unique then, is evident now in schools throughout the world.

Today the Training School at Vineland numbers 400 beds, and employs 250 men and women for the care and instruction of its children. Some of the "children" are past the prime of life. Some came as toddlers, lived and worked there, safe and secure, and are laid to rest in the school's own burying ground. At this writing, the age range is from two to 88 years.

There are 90 buildings housing students on 1,600 acres, with 650 acres of farms. There are four schools, an infirmary, chapel, greenhouse, laundry, canteen, auditorium, private lake and swimming pools. The

(*Continued on page* 105)

Billy, one of the sharers of the Gold Star Room of the Month when Topics' reporter visited the school, stands by while Mrs. Agnes Moore, housemother, comments on the neatness of one of the dresser drawers. This cottage houses boys in their final phases of rehabilitation; from here they return to their own homes and society.

A sterility test is performed on each sterilizing load. Absence of positive cultures verifies the sterility of the load. You are assured by this meticulous quality control procedure that the product is delivered to you sterile. Patient-Ready Dressings stay sterile until you open them.

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ACHIEVED through research
PACKAGED by modern equipment
STERILIZED with advanced techniques
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SURGIPAD® Combine Dressing
(All-Absorbent)

Exclusive new SOFNET fabric covering that is actually softer than gauze -- completely eliminates loose threads and annoying raw edges.

THE MOST TRUSTED NAME IN STERILE SURGICAL DRESSINGS

Johnson & Johnson

A resident of the school, left, keeps an eye on the camera, while Red Cross lifeguards Mr. and Mrs. James Graeff keep an eye on the youngsters in the enclosed swim area of the school's large lake.

operating budget this year is $1 million; reserve funds total $1.5 million.

The Board of Lady Visitors has long since become the Board of Visitors, made up of women in the Eastern area, mostly New Jersey. It meets four times a year and cares for children at the school who have no parents. There are chapters of The Training School's Parents, Inc., in New York, Cleveland, Washington, and Philadelphia, who meet regularly and once a year join in sponsoring a dinner dance in New York to raise funds. The F-M Club (the old Feeble-Minded Club), made up of 70 professional men, meets periodically.

The Training School Bulletin, one of two in the nation devoted to retardation, has been published regularly since the early 1900's. Devoted to all phases of retardation, it is issued quarterly to a mailing list of 10,000 practicing professionals. Pearl Buck's famous "The Child Who Never Grew," first published in 1950, helped destroy many parents' feelings of guilt, and doubtless helped augment membership in chapters of the National Association for Retarded Children, which now number over 800. Miss Buck, who is also president of the school's board of trustees, some years ago endowed a cottage in the name of her daughter, the little girl in the book, who is a resident at the school.

Requests for the school's latest booklet, "Home Care," were flooding the office of James Eadline, public relations officer, when TOPICS' reporter visited the school. With 5,000 copies printed and sent to public health associations, educators, and NARC chapters in every state, the supply was exhausted within 10 days. In that period, requests were received for 11,457 additional copies. Within 10 more days, requests had reached 25,000.

On the national level, the school has a professional conference annually, and maintains a speakers' bureau and a library from which general and specialized films are available. There are about 5,000 visitors annually, singly and in groups up to 100 and 200 persons.

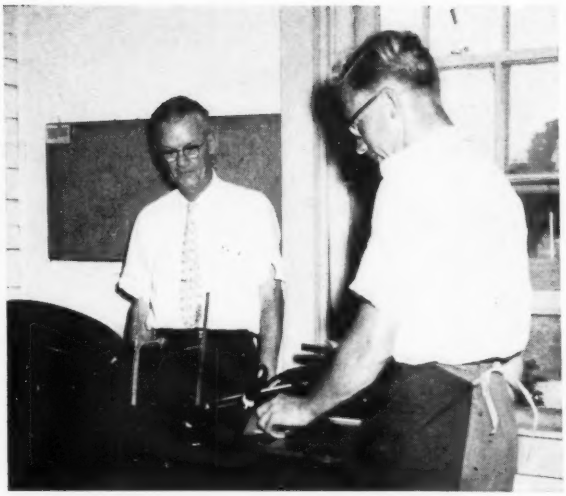
In its 70-odd years, The Training School has had only three directors. Mr. Garrison died in 1900 at the age of 47 after 11 years of back-breaking work to give substance to his vision. His legacy may well have been written in an old report found after his death: "My hope is that our institution will be second to none in furnishing scientific, medical and other original data which will greatly promote etiological and sociological studies."

The two men who became director of the school successively knew Mr. Garrison's vision well: each nurtured it independently within himself. Yet each, additionally, had his own bright star to follow. For Edward Ransom Johnstone, who had served two years as Mr. Garrison's assistant before the latter's death, it was the training of teachers, the development of lay support, and the promotion of scientific studies. For Walter Jacob, Ph.D., director of the school for the last 14 years, it has been long-term development, interdisciplinary research, outpatient clinics, educational aids for parents to help them understand and work with their children, and, most especially, the realization of a satellite system of units.

Dr. Jacob envisions a group of special satellite units in the next 10 years, pilot demonstration centers

Jean Zimmerman, R.N., director of nurses of the school's infirmary, takes care of a slight cut for young David, who enjoys a bandage as much as any kid. Mentally retarded children seem either to be insensitive to pain, or equally sensitive to slight or severe pain.

The head dairyman introduces a purebred calf, born in the barn a few days previously, to one of the younger boys. The grandfather of the newcomer was sold for $21,000. Once rated the nation's second best dairy farm, Menantico is rebuilding its herd.



One of the older boys, a printing apprentice, operates a handpress under the guidance of the shop's foreman, a veteran printer before coming to Vineland. Boys in the various workshops are given intensive, realistic on-the-job training under expert supervision.

for specific concomittant handicaps, located where the best staff and facilities can be obtained. They would function independently, yet be tied to the mother school by financial resources, technics and goals. "These units," said Dr. Jacob, "will give service to children, but they will be geared primarily to research and training. We have plans for a speech and deafness center, for units for aphasia, and for research in epilepsy and biochemistry. Our hope is to locate all the units close to universities for best staffing. Presently, we are negotiating with the federal government for the acquisition of Ellis Island in New York harbor, the old temporary detention center for immigrants, as an international diagnostic center for mental retardation. We are very close to realizing the establishment of a unit for the emotionally disturbed in Philadelphia, affiliated with the psychiatric department of the University of Pennsylvania. Funds have been set aside for the purpose.

"Impressive and encouraging as past and ongoing research is in this field," added Dr. Jacob, "there is a long and arduous road ahead, and we must prepare to both broaden it and travel it." *(EDITOR'S NOTE: Because research is such a vital part of The Training School story, it will be discussed at length in Part II of this article.)*

Presently The Training School has, in addition to its regular resident program, a summer program, a day school for residents of the South Jersey area whose parents bring them in and take them home daily; and outpatient clinics for speech and hearing, remedial reading, education, psychiatry and psychology.

Registration at the school is limited to 500, the maximum set to maintain the philosophy of qualitative rather than quantitative care. For parents to whom the fees are prohibitive, there are scholarships and foundation grants. One such fund was established recently to honor Alice Morrison Nash, educational consultant, who has worked full-time in the school's educational department for 60 years, the major portion as chief of education.

Dr. Jacob's concern for the child who remains at home is evident in the many books and pamphlets he has written. This past September, it received fresh impetus and help from a conference held at the school on the development of parental aids in the form of leisure and work activities for such youngsters. Based on practical child studies by psychologists and clinical workers who actually go into the homes, findings are being published in a booklet scheduled for release early this year.

All children whose parents apply for their admission to Vineland go through a three-month observation and diagnostic period for which charges are $500 a month. If accepted as residents, the annual charges approximate $4,500, depending on special therapies, medications and other needs. The observation and diagnostic program is also offered separately for parents who want their child to have the best obtainable diagnostic work-up. This, combined with the resident summer program for other students, which is $85 a week for nine weeks, is an excellent testing ground for children and is often a decision-maker for those parents still resolving conflicts regarding home care versus school care. This supportive attitude toward parents is reflected in the fact that the school, unlike most institutions, has no regular visiting hours. Parents can pick up visiting cards any day. They are free to go wherever they wish, and seek out any staff member.

When interviewed for admission, parents are requested to bring all paper work and records on their child. The admissions committee goes over the material, and if the child qualifies, he is brought to the school for the "O. & D." period, which includes a complete medical examination with EEG, neurological, psychological and psychiatric observation and testing.

In the admission interview, parents are also questioned about their aspirations for the child as clues to their own attitudes and understanding. "Some of the expectations," commented Dr. Jacob, "are simply not attainable, and we are familiar with the problems of parents who are not initially satisfied with what we tell them can be accomplished. We have unrealistic parents; we have those who have shopped for the answer they want to hear, and find it almost impossible to accept the only honest one we can give them. We do not set Vineland up as a miracle school, but try to predict the potential, and the O. & D. findings indicate with considerable accuracy how far the child can go in life."

The child is placed in a cottage chosen on the basis of what the professional observers see in that child. "We give the parents general information on the child's health and his adjustment to the cottage and other children as reported to us by the housemother," said Dr. Jacob. "We do not counsel at this early date. Findings are not sufficient and parents are often too emotional. Although many tests may have been given the child in the past, we repeat the entire spectrum."

Initial administrative reports on the child's psychology, education, living habits, and adjustment to other children— a very large folder in a short time— go to the central records office. There they are compiled and sent to a classification committee which meets for an entire afternoon once a week, and is made up of the superintendent and the heads of child life, education, psychology, vocational training, the infirmary, and the speech and hearing departments.

In the light of the individual study made, the committee recommends a program adaptable to the child, going on the assumption that he will be accepted. At the end of the three-month period, a complete report in lay language is sent to the parents; a complete professional report is also available to their own doctor or referring agency. If the school feels it cannot help a given child, the parents are referred to an agency that can.

Some children are refused admission, most of them because they have such severe emotional disturbances that they would disrupt the stable environment established for the resident children. Children with mental retardation the primary issue form the majority of the school's residents, and they are admitted from anywhere in the world, regardless of race, creed or color. Many have secondary issues of emotional disturbances, seizures, speech and hearing defects, cerebral palsy, and other problems which can be helped. They may range in chronological age from two years up, and must be ambulatory and preferably toilet-trained. Although commonly children with I.Q.'s above 50 are considered educable, and those below 50 trainable, many more factors are utilized by The Training School in determining programs.

If the child is accepted after the O. & D. period, he is entered as a resident. If the first choice of a cottage has been compatible, he remains there and enters the educational and training program. Each child is re-evaluated once a year in all physical and mental areas. "We feel," explained Dr. Jacob, "that much can be missed by waiting too long to re-evaluate the child. For example, a slight hearing loss might be missed in a classroom, or put down to inattention."

The younger children are housed in the main unit at Vineland; the older ones at the Menantico unit, a large farm area. There are cottages for youngsters from 4 to 8 years; for teen-agers; and for those in the early 20's. The boys' and girls' cottages, each a two-block row, are separated by the organizational buildings and schools. There are 15 to 20 children to a cottage, and the boys have married couples as "parents." The girls are in the charge of two women.

There are an average of seven children to a class for maximum individual attention, in both classroom and vocational training. During the winter, classes run on the same schedule as public schools, with the bell at 9 a.m., and assembly every Friday.

Training takes many guises outside the classroom, and every child has a job, to help make him feel wanted and responsible. The grounds are as beautifully kept as any campus, and the casual observer, according to Mr. Eadline, sometimes gets the impression that the youngsters are being used for maintenance work.

"They aren't, of course, at least not in the same sense. First, we maintain a full-time grounds staff. Then many children are apprentices, or are student-employees. They are assigned light work during class hours, in a given area, where they are expected to be at a given time. To outsiders, we seem to have a very flexible way of doing things here because of the pleasant, unhurried pace. Actually, it's the opposite; it just isn't obvious, and it doesn't chafe. But if a youngster leaves his cottage and doesn't show up where he's supposed to be, an immediate alert is ordered and a search started.

"Our youngsters have little desire to leave because this actually is their home—not because we say so, but because that's how they feel about it."

Menantico, where the older children learn and work, is one of the biggest farms in the state, and some years ago its dairy farm was rated second in the nation. Under present supervision, the herd is rising again, and when TOPICS' reporter visited, some of the purebred cattle were being groomed for showing. The farm produces practically everything, except meat, to feed the school the year round. And even in the meat department, the figures are impressive, with 60,000 pounds of pork slaughtered and frozen each year. The farm produces 1,000 quarts of milk and 5,000 eggs daily. New Jersey is one of the rare spots where sweet potatoes will flourish, and the farm raises enough surplus to sell profitably.

"Farming is a wonderful way to train the retarded," said Dr. Jacob, "because it's quiet, methodical and noncompetitive. It brings these children of all ages close to nature, where they seem happiest and most relaxed. It's changing, of course, and the change brings problems. The old horse and plow were com-

Girls eat lunch together in a cottage dining room. Bedrooms, shared by one or several other girls, are individually decorated, and the youngsters add their own touches, just as they do in all schools.

Outdoor dining is the choice of the boys during the summer months. Garden-fresh fruits and vegetables from the school's farm supply most of the food enjoyed by residents and staff through the year.

paratively easy and attractive to work with. Tractors are more of a barrier between the children and the earth, are more difficult to operate and require new knowledge to maintain. But the farm is famous for its experiments and technics, so I'm sure it will be able to cope with this problem."

Education itself is repetition and rote. "Our goal," said Dr. Jacob, "is to train youngsters to total living, to be as self-sufficient as possible in the outside world; so there is not too much emphasis on book learning. Our youngsters do a good deal of visiting outside, individually and in groups, and they enjoy the excursions greatly. Even so, the small hand seeking the larger hand, and the question, 'Will they hurt me?' are familiar to us. Mr. Garrison's rule of 'happiness first' is still first.

"We would like them to be able to read books a little more advanced, but it is even more important to us that they be able to tell time and to have a sense of responsibility to personal hygiene, to count change and understand traffc signals.

"Second only to the youngster's happiness is our striving to instill the greatest possible measure of self-sufficiency. This is a matter of very concentrated effort with the individual child," continued Dr. Jacob. "The brain-damaged child may show abilities which span the range from almost normal to levels so low as to be practically useless for training. Actually, this condition is found to be several conditions. Jobs containing several steps seem like two jobs to him. Each must be taught separately. It is as if he looks at a picket fence and sees only the pickets, not the fence. Thus, much of our emphasis on repetition and rote."

The general objectives of the educational program are to help boys and girls prepare for and carry on "effective living" by developing ability to adjust and get along with others; to be as self-supporting as possible; to be good citizens; and to use their leisure time constructively.

Specific objectives vary according to age level. In the nursery department (4 to 9 years in chronological age) these are personal and social development, emotional adjustment, and motor development. In the pre-primary department (5 to 10 years), development of academic readiness is added. In the primary department (8 to 13 years), development of academic skills is added. In the intermediate department (10 to 15 years), the primary skills are intensified.

In the departmental school (12 to 18 years), objectives include training leading to personal and social development, emotional adjustment, motor development, academic growth, and development of work attitudes and habits.

Boys and girls 16 to 21 years of age matriculate in the pre-vocational department, an experience program for interest and ability descovery and training in appreciation of time, dependability, and following instructions. A half-day program in one or two areas, sometimes alternating with classroom work, is carried on by trainers using production areas as laboratories.

The apprenticeship program, including those 19 and up, is for young adults who have demonstrated ability and interest in a specific area, and who are assigned to a production area for further training.

The occupational activities program, semiproductive, is for older persons who are given an opportunity to feel they are useful persons and can use their limited abilities and energies constructively. The occupational activities program, therapy, is planned to include interesting manual and social activities and is designed to serve older children for whom school or vocational or other activity programs are not suited.

The extension classes are planned to give pupils who are on full-time pre-vocational or apprenticeship programs, and who cannot attend day-school classes, certain academic opportunities. Courses include information and practice in tool subjects such as reading and writing, especially as they relate to pupils' job or work areas.

A monthly progress report on students in vocational training is sent by the trainer to the vocational supervisor, for consideration at the weekly classification meeting. Occasionally, a trainer will recommend a change for the consideration of the committee. For instance, a boy may have been assigned to the greenhouse, for which work he shows little interest

or ability. A mechanical bent may show itself.

The meeting may suggest work in the canteen. The hospital department vetoes this because he is on a special diet, and may be able to sneak an occasional candy bar, which he couldn't do in the closer supervision of the print shop. The superintendent rules out the print shop because the record shows the child exhibits little emotional stability, and probably hasn't the patience for typesetting and the repetitious movement of presses. The problem is thoroughly talked out and the solution agreed upon before a new assignment is made.

Most consistently close to the children at the school, on a professional level, are the unit leaders, men and women graduates in education or psychology, who work under the guidance of Andrew Sember, supervisor of child life. These are the "big buddies," the confidants, disciplinarians and trusted friends of the children, the liaison between the cottage parents and the real parents. They are responsible for the inspection of the cottages and the children for neatness and cleanliness; they plan all recreational activities, trips, vacations and outings.

Mr. Sember, a graduate of Lock Haven Teachers College in Pennsylvania, and Bucknell University, came to Vineland in 1957, and has expanded the recreational program to full-time activities. He is recognized as an expert in integrating retarded youngsters into the same types of programs enjoyed by normal children, or variations adapted to their abilities.

"For unit leaders, we seek out young people experienced with children," said Mr. Sember, "because their level of enthusiasm is generally higher. Some of them have rather unorthodox ideas about what can be done with retarded children, but very often the unorthodox works admirably.

"These unit leaders are very close to the children, and know them intimately. We talk to the cottage staff about them, and add our collective knowledge to the reports for the use of the other professionals on the staff. All professional records are meticulously kept, and part of our job is to translate them into lay language for parents. With the real parents, with whom we also establish a close relationship, we don't emphasize such things as the child's I.Q., but rather interpret it for them.

"We feel it is absolutely imperative," he continued, "that the children live with house parents, and that they not be expected to adjust to a variety of people. Some schools have three eight-hour shifts, but we believe it best that the cottage staff be on a 24-hour basis. Our permanent staff does not get week-ends off; a relief couple takes over for them on certain weekdays. We do not believe in the older children taking care of the younger ones, either, except as they do it spontaneously, because we do not feel that either one is up to this sort of relationship and responsibility. When we take them on outings, though, each is assigned a buddy for companionship and a feeling of security. If they must get mislaid temporarily, it's easier to spot a small group than an individual!"

The after-school and evening programs are extensive, including scout groups, 4-H activities and a large variety of clubs. There is no limit placed on the number of activities a youngster can join, the philosophy being that he will settle down to his chosen ones or run out of energy without the frustration of being excluded.

The school is now increasing co-ed activities with square dancing, folk dancing and roller skating groups, all closely supervised.

For the summer program, the cottage areas are split into seven playgrounds, with a counselor and assistant in charge of each. The groups are classified as close to the children's mental and social age as possible.

During the summer, a portion of the school's large lake is enclosed with wire mesh for swimming, with a lifeguard and assistant on duty from 10 a.m. to 7 p.m. Every child is given an opportunity to learn to swim, and the Red Cross instructors in charge report that many retarded children become good swimmers.

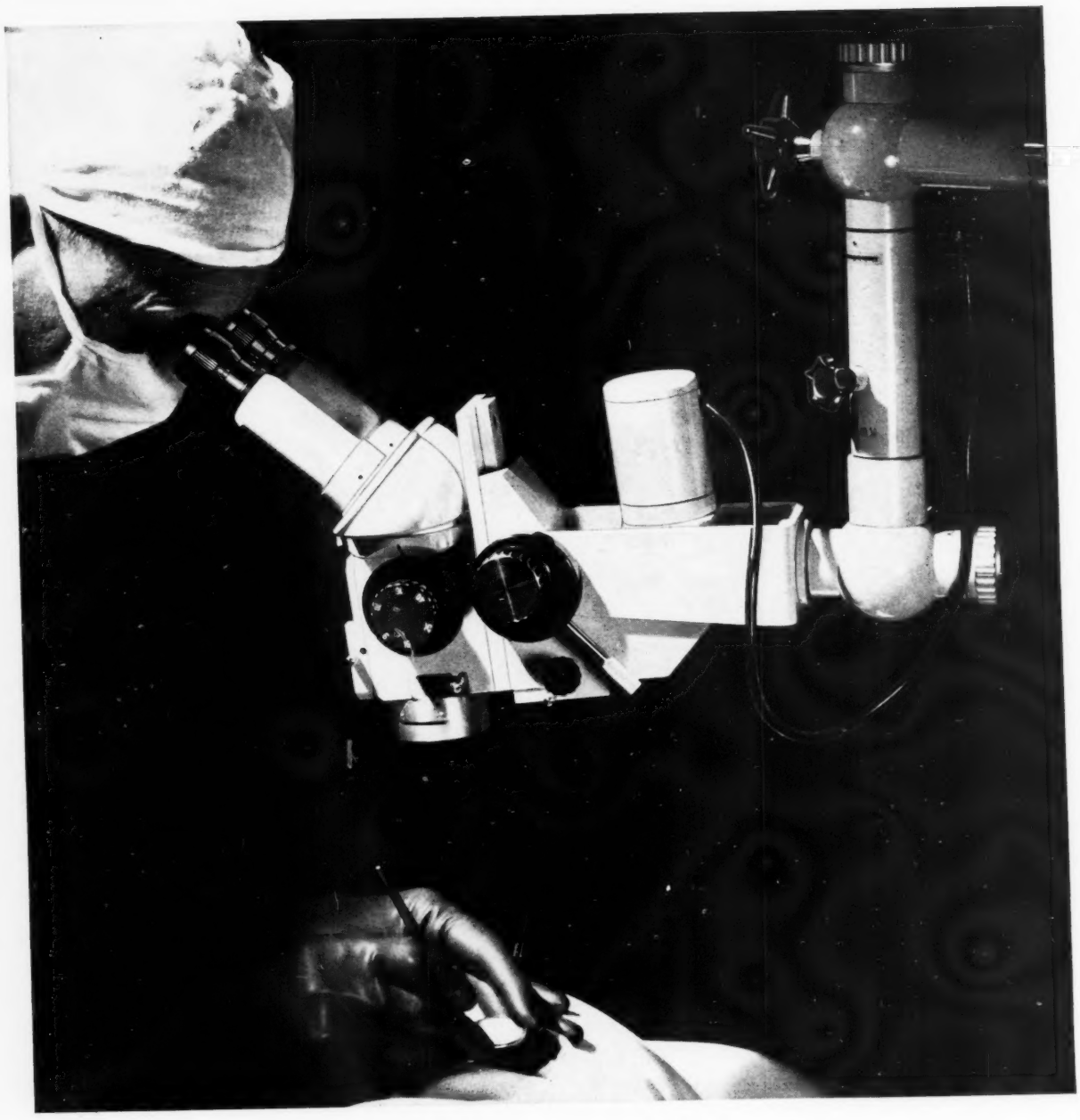
Happiness Park, located in the farm area at the edge of the lake, is new this year, a present from Parents, Inc. It is a large building for games and parties, and has a complete kitchen, showers and toilet facilities. The woods are crisscrossed with pine-fragrant paths for hiking, and tables and benches are set out for outdoor meals.

Riding about the grounds with public relations officer James Eadline was a liesurely stop-and-go procedure. The trustfulness, the eagerness for affection, and the deep attachments most retarded children form were evident in all close enough to come to the car. It was evident in the shouted "hi's" from teenagers working in the fields and young messengers headed for the various buildings.

In all cases, the children were called by their first names, and in response to a query as to whether he knew all the children by their given name, Mr. Eadline nodded. "We all do," he said. "In fact, most of our staff know the middle initial, too. All youngsters are sensitive; these are especially so. You can imagine how they'd feel if we called several by name and hesitated over the rest. You can imagine how *we'd* feel!

"When I first came here," he continued, "it was around Christmastime. As an ex-reporter, I'm supposed to be able to cover up my emotions when others reveal theirs. But the sight of some of these children, including gray-haired men in their sixties, climbing into Santa's lap and whispering into his ear with utter confidence, just about derailed me. Now, though, I really see them as little children, and love them the way you love little ones.

"We get the same reactions from house parents," he concluded. "We find a couple we feel will be ideal as to temperament, interests and abilities, yet within a week they may present themselves on the verge of tears and in full accord that their resignation is the only solution. But experience has proved if we can keep them three or four weeks, they will stay as long as they can work. The children have twined themselves around their heartstrings, and they cannot get away — nor do they want to."



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OB DEPARTMENT

ACOG Discusses Nurse-Resident Problems, Progress in OB Nursing, Rooming-In

Nurse-resident problems, progress in obstetrical nursing, and rooming-in were among the topics of panel discussions at the American College of Obstetricians and Gynecologists division VI meeting, November 10-11, in Chicago. TOPICS' report spotlights some of the pertinent points and conclusions brought out.

Nurse-Resident Problems

Personality conflicts are responsible for practically all the problems which arise between nurse and resident (and other hospital personnel, too, for that matter), summarized William F. Mengert, M.D., at the close of the panel discussion on nurse-resident problems. The panelists, all from the University of Illinois School of Medicine, Chicago, were: Dr. Mengert, moderator, professor and head of the department of obstetrics and gynecology; Miss Virginia Counts, R.N., and Peter Siegel, M.D., resident, retiring president of the ACOG district VI junior fellows division.

In her opening remarks, Miss Counts stressed that good relationships between the medical and nursing staffs in a teaching hospital require:

Understanding by each group of the aims and philosophy of the department and of the specific aims of each other group.

Respect by each for the specialized skills of the others.

Thorough knowledge of hospital and departmental policies and procedures.

Recognition of the line of authority within the department and institution.

Good communications, including regular joint meetings of the various staffs to help clear the air before a situation becomes a problem or an explosion.

In defending the resident's position, Dr. Siegel stressed:

Responsibility for the patient's care ultimately rests with the doctor, thus he must have authority. "Would-be doctors make poor nurses."

Policing of the doctors is the nurse's job, too, to help enforce hospital regulations, but it should be done tactfully.

Inexperience of a new intern versus the established nurse poses a perennial problem in a teaching hospital. It may be a long time before the intern learns all that the older nurse already knows. Each must *earn* respect. But the nurse must again use tact.

Audience and panelists together added these brain stimulators:

Jealousy – The nurse looks at the young resident and thinks of the doctor in the future who'll be "making more money than she'll ever see."

Teamwork – The doctor tends to think of the nurse as working alone, whereas he must get used to her delegating part of the work to others.

Orientation – The nurse gets tired of the same questions over and over again from new intern and resident.

Planning – The nurse MUST know ahead of time what procedures might be performed and what equipment will be needed. Each doctor means a change of how things are done and what is used. The nurse must have everything ready for each. Central service often limits the periods when equipment can be picked up, so that it becomes impossible to obtain extra equipment at odd times during the day.

Cooperation – "The doctor seems to feel no responsibility for the return of equipment to its proper place."

Criteria for a good nurse centers around:

1. On the job when needed, on time.
2. Willing to help out when and where needed.

(Continued on next page)

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3. Compliments her co-workers and works with them.

4. Sets a good example.

5. Thinks of the 24-hour picture, not just her own shift.

6. Helps keep up supplies.

7. Carries out hospital-prescribed procedures even if they sometimes irritate the doctor.

Progress in Obstetrical Nursing

"Complacency must *not* creep into this specialty where danger lurks around the corner," cautioned Frederick J. Hofmeister, M.D., chairman of ACOG's district VI, at the opening of the panel he moderated on "Progress in Obstetrical Nursing."

Many areas of progress were heralded by the group, but they also urged wider adoption and better usage of improved practices. Panelists included Sister Mary Juan, R.N., O.S.F., St. Mary's Hospital, Rochester, Minn.; Mrs. Grace Frandsen, R.N., University Hospital, Omaha; and Mrs. Cynthia Franklin, R.N., Chicago Lying-In Hospital.

Training Nurses — It was brought out repeatedly that the teaching staffs of large hospitals must also prepare their graduate nurses for duty in small hospitals with limited facilities. This means the nurse must be capable of carrying full responsibility when the smaller hospital does not have a resident doctor on hand 24 hours a day, seven days a week, nor has a more experienced nurse present for that shift, either. The small hospital nurse must often double as anesthetist or technician, and must perform other specialties when the need arises. In OB she has the added problem of the busy small-town doctor who does not want to be summoned from his office calls or his night's sleep until the mother really is ready to deliver — but he doesn't want to get there too late, either. The nurse should be properly trained for this latter possibility, too.

Three weeks in OB during the student nurses' junior year is not adequate training for such responsibility, the panelists agreed. One suggested course was to let the student nurse return to the delivery room, preferably in her senior year (and not as a relief nurse at night) when she would know more and thus get more out of her training. The ideal would be to keep her ten weeks to three months in OB.

Greatest insecurity is felt by the nurse in gauging the progress of a patient in labor, with her greatest fear that the baby will arrive before the doctor does. Panelists felt it is inevitable that such an emergency will happen some day; and the nurse must be prepared for it. But the doctors must also recognize that the nurse is not necessarily "at fault."

Beginning OB student nurses should have the same preparation as patients, because they have the same fears personally and identify very strongly with the patient. It was suggested that each student meet a mother in a pre-natal clinic and study her as a family project throughout her treatment, including the phases of care in which the student cannot directly participate.

New staff nurses should be oriented just as is the student, seeing all the demonstrations, procedures, and so on, though in less time. Give the new nurse her responsibility first on days with others to help, and when she starts on nights let her phone for help if needed.

Natural Childbirth — Mrs. Franklin recommended that a qualified R.N. with a B.S. degree be sent to the Maternity Center in New York or a similarly qualified location for training, then return to teach the rest of the personnel before starting this program. But she stressed that the "one chosen must have healthy attitudes about sex and think that having a baby is a very nice thing!"

Post-Delivery Room — Sister Mary Juan declared that she and all of their doctors are completely sold on the post-delivery room. The new mother should be kept there at least until she has voided, usually two to eight hours. She should be cared for by a nurse, not an aide, who can:

1. Relax the tired mother with a complete bed bath.

2. Force fluids to help a dehydrated mother improve bladder function.

3. Give medication and check off the post-partum orders. Order drugs and make out the medication cards.

4. Give perineal care; massage and measure the fundus of the uterus; and watch the cardinal symptoms and general condition of the patient closely.

5. Keep the mother comfortable and happy by knowing she is being well cared for.

The post-delivery room has nowadays reduced bladder and bowel care to "little trouble," with the help of early ambulation, better diets and medical suppositories.

Tub Baths — Sister Juan calls them a "godsend" for both mother and nurse after eight years of use. A one-month survey in the beginning found no elevated temperatures which could be related to tub baths, and mothers who had baths showed obviously higher morale. Baths plus earlier ambulation also have nearly eliminated four-hourly perineal care and the former breast care cycle of soap-alcohol-cream-silver nitrate for cracked nipples.

"We also have known without making a study," Sister Juan pointed out, "that warm sitz baths are the best healing treatment for any type of perineal incision." St. Mary's Hospital at Rochester delivers about 1700 patients per year with an average four-to-five day stay and has four tubs. She urges, "Build them in, if necessary."

Teaching Mothers — Demonstrations have become more effective today by using the mother's own terms, materials that are available at home, and simplified procedures. One mother was quoted as saying, "It used to take all morning to give a baby a bath; now it's a pleasure."

It was agreed that most young mothers today are very inexperienced in household duties and need

more teaching than years ago when they were their mother's right arm at home. Thus classes on baby care, formula preparation, and self care are considered a "must." Sister Juan believes the R.N. can have more time for teaching because an aide can give tub baths and change the beds.

Rooming-In

"Hospitals hesitate to adopt rooming-in simply because there is a misconception as to what it is and why to have it," said Miriam Blomquist, R.N., Michael Reese Hospital, Chicago, during the rooming-in panel. She pointed out that only one hospital in the city proper has rooming-in so far.

"To overcome this misconception," she suggested, "we must educate slowly. Start with one or two doctors and nurses at your hospital who appear interested. Then gradually 'drop' ideas to others at strategic moments. We must indoctrinate not only doctors and maternity nurses, but the administrators, mothers, and fathers, too."

Others on the panel were Alfred Stein, M.D., also of Michael Reese; Miss Jeanne Lichter, R.N., and David N. Danforth, M.D., moderator, both of Evanston (Ill.) Hospital.

Preparation – The panel agreed that it is natural to "fear the new," so the personnel must become familiar with the system first. If possible, they recommended, send a nurse or doctor to visit or work at a hospital which already has a good R-I unit and who will return to teach your own staff. Start small until you get your unit working efficiently.

A hospital need not be designed for R-I, but can be adapted to it in many ways. Michael Reese remodeled three adjoining rooms so that the middle room contained four babies with windows in the walls to let the mother watch at all times. Two mothers were in each outer room. Mothers could enter the babies' room directly, yet staff could enter from the hall.

Evanston has a two-crib unit between two patient rooms of two beds each, combining a third-day mother and baby with a first-day mother whose baby is still in a special new-baby nursery. Half of the new hospital's 60 maternity beds are devoted to R-I.

Another hospital converted private rooms to R-I which "worked very well if the mother was prepared for it."

Advantages – Rooming-in is different both as to psychology and education. The attitude toward the baby changes: in the central nursery he is considered a sort of by-product of OB, whereas in R-I the care of the mother circulates about the baby, who comes first.

The group stressed that R-I is the best chance to prepare the mother for care of her baby after leaving the hospital. It establishes good mother-baby relationships and is the best way for her to gain confidence. It also builds great feeling between mother and nurse.

The mother can get just as much rest, if not more, under R-I, because it is not yet her responsibility to give primary care to her infant.

No diarrhea nor impetigo has occurred among two Dublin, Ireland, hospitals which room the baby either in the same bed with the mother or in a small crib at the foot of her bed, Dr. Stein reported. Michael Reese also has not had either disease in its rooming-in units since they started in 1954, although some has occurred in the central nursery.

The pediatrician gets far fewer calls from the new mother after she returns home from R-I than under the central nursery plan.

Repeaters – Rooming-in patients who are most excited about its advantages are not the primips as expected, but rather the multips who have had R-I before and want it again. In addition, there are special cases in which R-I has helped such as:

– An Italian mother who had her first baby 13 years earlier in Italy and the grandmother cared for it completely. The mother didn't know what to do with the second baby and was panicky until she entered R-I.

– A baby with a cleft palate – the mother got along much better.

– The mother of a boy 15 and a girl 10, who breastfed her third baby and was very happy.

Nurses Prefer It – The panelists termed rooming-in a much more satisfying form of maternity nursing, which uses all the nursing skills, whereas nurses often object to the other type of maternity care as "just too much of the proverbial three B's."

When Evanston was building its new hospital, personnel volunteered for all sections except maternity. After a bit of experience with the new R-I unit, they were greatly interested in continuing work there. This attraction might help to offset the fact that students don't seem to want to go into maternity nursing in most hospitals today.

Modus Operandi – At Michael Reese, there are 75 maternity beds and demand is great for the four in rooming-in. There is always a waiting list and patients transfer into the unit when another goes home. They are not allowed to return the baby to the central nursery, so if the mother becomes ill and must be transferred, the baby must either be put in isolation or be sent home. The unit is staffed with one graduate on each shift, plus a student in the daytime. The premature nursery is located in pediatrics and the mother can't leave OB to see her baby, so she couldn't have R-I. But she still can have bath and formula demonstrations, and so on.

The new Evanston Hospital has rooming-in for half of its 60 beds. They found R-I very complex to run after changing from the central nursery plan, especially for the first few months. It took about a year to get used to it and get things running smoothly. There must be proper indoctrination of the nurse as well as the mother. Evanston rotates all personnel throughout the maternity department as a whole. Deliveries formerly averaged eight a day, now are 12 to 14. The babies go into a special nursery (not the central) for the first 24 hours, in which time they get no food or water. They cannot go into R-I units until after getting their first formula at 36 hours,

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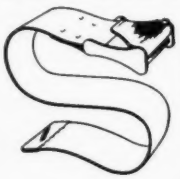

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which permits detection of most of the possible difficulties. They go to R-I then only if the mother is feeling well.

At Evanston, a baby is never moved from the central nursery to R-I, in order to prevent transfer of any possible infection from central. There are three basic plans in use for maternity care: plan A for the central nursery; plan B for rooming-in during the day but with the baby moved to a separate nursery at night; and plan C for full-time rooming-in.

For staff care Evanston groups eight mothers and babies, but they combine one first-day mother with a third-day mother so that the unit averages eight mothers and six babies. Even on the demand schedule the babies all wake up at the same time, anyway, to be fed and if the nurse must fix formula, change diapers, and so on, she's pretty busy.

The American Academy of Pediatrics stipulates one nurse for 12 babies in the nursery, or for six premature babies, or for seven post-partum patients.

Breast Feeding – Under two years with rooming-in, Evanston has maintained its high rate of 80 to 90 percent breast feeding which was established in earlier years. They are very proud that the rate has never dropped below 60 percent in any three-month period, with about 98 percent participation as tops. They attribute this record to the enthusiasm of pediatric and obstetric units and Evanston mothers, whose Junior League operates an active breast milk bank.

Fathers – Evanston Hospital has never permitted fathers to visit while the baby is in the same room, but only when the babies are in their own room behind glass.

Michael Reese is under regulations of the Chicago Board of Health, which lets fathers visit the babies but requires that they scrub under the direction of the nurse, then wear cap, mask, and gown to the R-I unit. One other visitor is permitted the mother, but the baby can't remain then. In the two-bed unit, when one patient's visitor is not a father, they either draw the curtains separating the beds or take both babies from the room. At first the Board of Health would not let the fathers participate in care of the baby, but the mothers complained that all they saw during visits was the father's back, because he was constantly watching the baby through the window.

Musts for Success – Success of a rooming-in unit depends wholly on the nurse. She must be a warm, friendly, flexible person; she must convince the mother that *this* baby is different from all others and there are no hard and fast rules for all babies; and she must be competent, for if she isn't she can make the mother very uncomfortable. In addition, there must be continuity of care from one shift to the next. If not, nurses can confuse the mother and make her very nervous, even though she must also learn there is more than one way to do each thing. Both nurse and doctor must be able to "give up" the baby when the mother or father wants it (possessiveness is strong), even though the parents may be slower or clumsier or seem to know a lot less about it.

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For further information see postcard opposite page 138.

HOSPITAL Topics

BUYER'S GUIDE

For further information on any of the products, please check the Buyer's Guide number on the reply card opposite page 138.

600. Exercise-rehabilitation bed

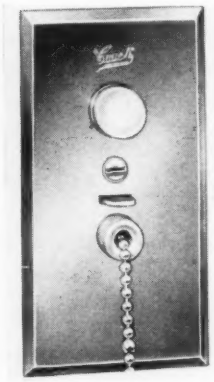
The Franklin bed, new concept in hospital beds for the treatment of cardiac complications and post-surgery and physical therapy treatments, is now available nationally. Bed allows the placement of patients in the best possible positions for exercising and rehabilitation. The John Bunn Corporation, 163 Ashland Ave., Buffalo 22, N. Y.

601. Laundry additive

Liquid-Lite, combined optical brightener, fabric softener, anti-chlor and mildew preventative, eliminates bleach, bluing, softener, and one rinse, shortening the cycle, thus saving time and labor costs. Conserves hot water, saves soap cost, reduces other supplies. Reduces linen replacement costs, since treated linens last longer. Uniform whiteness in each load; no spotting or streaking; absolutely no build-up; no damage to wash 'n' wear fabrics; no yellowing of nylon; and no yellowing in storage. Harmless to fabric, colors and skin, product is not a fluorescent brightener, will not affect x-ray diffraction patterns. One gallon will treat 5,000 lbs. of laundry initially; subsequent washings require only one gallon to 10,000 lbs. Tower Chemicals, Inc., Box 473, Carnegie, Pa.

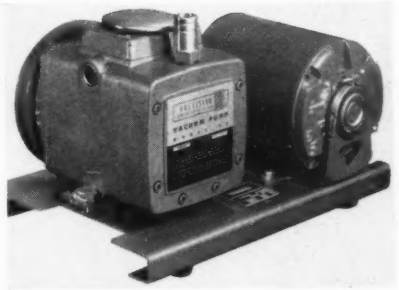
602. Towel

Jet-Towels, quilted fabric for washing and wiping counter, dishes, reduce costs since they are almost impervious to stains and odors; quick rinse frees them of soil. Quilting increases bulk and absorption. Chicopee Mills, Inc., Dept. R8, Milltown, N. J.



603. Signal

Pulling cord on this room station momentarily sounds a buzzer at the supervisory annunciator; releasing cord lights a signal lamp at the same location. Repeated operations cause intermittent buzzing and a flashing signal Signal light. Station is re-set by pressing down the lever at the corner of the plate. S. H. Couch Co., Inc., 3 Arlington St., North Quincy, Mass.



604. High vacuum pump

Model 25, with a capacity of 25 liters per minute, is both smaller and lighter than pumps of equal, or less capacity, and is said to operate with greater efficiency at low pressures. Guaranteed ultimate vacuum of 0.1 micron, quiet operation. Can produce the high vacuum required for freeze drying of blood, human milk, biological materials and polio virus, as well as general duty work. New model expanded pump line to 31 types; and models 75 and 150 are now available with gas ballast valve allowing them to be used with vacuum systems containing moisture, other undesirable vapors. Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.

605. Percussion hammer

New hammer consists of a longer, flexible handle, with donut-shaped pliable rubber head. Because the Neuroflex Percussion Hammer permits a brisker, sharper tap, physician is assured of a more sensitive reflex examination, making it especially valuable for testing patients with sluggish or inactive reflexes. Easy to manipulate; minimum patient discomfort. Clay-Adams, Inc., 1414 E. 25th St., New York 10, N. Y.

606. Spray products

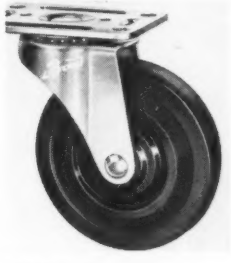
Manufacturer has introduced a new 50-pack dispenser box, and a new companion line known as Hospital and Laboratory Products (H & L). Included in the economical line of spray products are 12-ounce cans of skin protector, skin freeze, adhesive tape remover, bandage, tincture of benzoin, and room deodorant. Alconox, Inc., 853 Broadway, New York 3, N. Y.

607. Garbage disposal unit

Availability of all five of the manufacturer's commercial garbage disposers as free-standing units, by means of an economical adapter kit, has been announced. Each of the fractional horse power disposers are now available as compact floor units, completely eliminating complex installation problems and high cost of sink and sheet metal work. A free-standing unit may now be set up anywhere, in less than five square feet of space, and later, if the situation dictates, installed in a regular sink. Kit includes a sturdy, three-legged stand; an 18" bowl sink; and a manual, three-pole starter. Line is composed of five basic models. Components are used to form 17 basic groups, in any one of 108 combinations capable of grinding 200 to 2,000 pounds per hour. Waste King Corp., 3300 E. 50th St., Los Angeles, Calif.

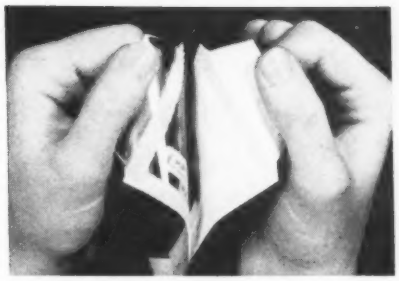
608. Thermometer

Circular dial-type thermometer accurately records the right temperature of the milk in baby's bottle by transmitting heat through a copper band to the sensitive bimetal element. Pliable band forms to the contour of any bottle, and is held securely in place by an elastic cord. Not affected by normal heat and humidity, easily read dial and nickel plated to resist tarnishing. Device saves time, and eliminates guesswork. Zinn Originals, 321A Greenwich Street, New York 13, N. Y.



609. Caster

New series of institutional casters are available for medical, food, hospital and institutional fixtures and equipment. Wheel diameters range from two to five inches, and load capacities up to 200 pounds. Feature "escalator" ball race for stability; casters are made in both plate and stem styles. Cushion rubber, hard rubber and semi-steel wheels are standard. Bond Foundry & Machine Co., Manheim, Pa.



610. Steril-Peel

New sterile package for Bardex Foley Catheters that provides for easy, instrument-free opening with an accepted aseptic technic, is available. Steril-Peel package is securely sealed by specially designed equipment that ensures a positive closure to maintain sterility of the catheter. Opening is quick and simple — two exterior tabs are peeled apart and away from the sterile interior; scissors or forceps are not needed. Saves time by eliminating processing and autoclaving; affords the added convenience of easy opening without contamination of contents. C. R. Bard, Inc., Summit, N. J.

611. Meter shower

New metering shower saves up to two-thirds the amount of water usually consumed in taking a shower. Easy Push self-closing device features an adjustable metering valve with an integral, key-operated volume control for regulateng water supply. When handle is pressed down with finger tips, shower gives up to four-and-one-half g.p.m. of tempered water and then shuts off automatically. Water is not wasted while user is soaping. Ready to rinse off, user presses the handle once or twice more and the shower is completed. Total water consumption is four to six gallons, compared with 12 to 18 gallons with conventional shower fixture. Available in built-in or exposed models. Both equipped with self-cleaning shower heads adjustable to normal, flood or needle sprays. Speakman Co., Wilmington, Del.

612. Bicycle exerciser

Built like a regular bicycle, exerciser stands solidly on four rubber-tipped legs, well braced and properly balanced. Occupies little space, easily portable. Fitted with ball-bearing adjustable resistant roller and automobile type speed and mileage indicator. Turning thumb screw near handlebar brings friction roller into contact with tire; quick adjustment can be made to allow wheel to run freely or to increase leg resistance in pedaling to desired degree. Finished in silver-grey chip-resistant enamel. One year guarantee. MacLevy Associates, Inc., 189 Lexington Ave., New York 16, N. Y.

613. Bottle breaker

New bottle breaking device saves storage space, eliminates safety hazard, reduces trash removal charges to point where it pays for itself within months. Glass food and condiment containers, up to one gallon in size, are dropped into the mouth of the unit, which instantaneously breaks them into small pieces, dropping broken glass into container underneath. Rapidly revolving drum with "fins" of special alloy steel disintegrates the containers with quick impact. Machines range in size from small economy models to giant conveyor-fed units. It is estimated that there is an 80 per cent saving in space through use of the unit. Centriblast Corporation, Box 221, Pittsburgh 39, Pa.

614. Thermal reproduction paper

Temp-A-Copy, a highly legible paper, is designed primarily for use in thermal reproduction machines, but may also be used to make typewritten copies without carbon paper. Capable of copying any one-sided material that can be presently copied by other such papers, has unusually high degree of sharpness. A dry electric process, it requires no liquids or chemicals. Will not roll up or slip, lose its sensitivity, or become embrittled with age. Kept away from heat and sunlight, has indefinite shelf life. Will make up to 12 highly legible copies at a time. Stylograph Corp., 205 W. Main St., Rochester, N. Y.

615. Steel cabinet

New cabinet, which holds four bedpans, originally custom-designed for a special order, is now part of standard line of steel cabinets and casework. Four-compartment bedpan holder, concealed behind louvered doors, slides in and out noiselessly, and is equipped with a removable stainless steel drip tray. Drawer in top holds towels and other accessories. Nellis Industries, Inc., McClure, Pa.

616. Nitrogen analysis

New Automatic Nitrogen Analyzer performs the time-tested micro-Dumas method within its 12- to 15-minute cycle. Will measure nitrogen in an almost unlimited variety of materials, and is excellent for numerous determinations presently made by the Kjeldahl process. Only one operation necessary for continuous determinations. Achieves all the accuracy inherent in the micro-Dumas process, and eliminates individual analytical technic. Nitrogen is gathered in a new type of nitrometer, and nitrogen volume is read directly in cc's from a digital counter. Instrument requires only 18 inches of lab bench space. Coleman Instruments, Inc., Maywood, Ill.

617. Porto-Lift

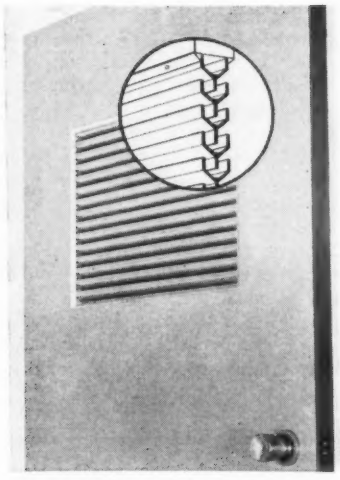
New, standard model Porto-Lift, completely chrome finished from base to seat supports, is available. The manufacturer of the effortless action patient lifting equipment states that the new unit will be marketed at no increase in price over the discontinued painted models. Porto-Lift Manufacturing Co., Higgins Lake, Mich.

618. Germ-free telephone

Danco sterile telephone has built-in sanitizing system which kills bacteria molds and viruses within seconds after the mouthpiece is returned to its rest position. Uses the Westinghouse "Sterilamp" tube developed to destroy bacteria and other micro-organisms in the air or on exposed surfaces. Each time the mouthpiece is returned to normal position, Sterilamp tube is activated, releasing a controlled amount of ultra-violet rays. In decorator colors. Sterile Telephone Corp., 17 W. 44th St., New York 36, N. Y.

619. Tracheostomy tube

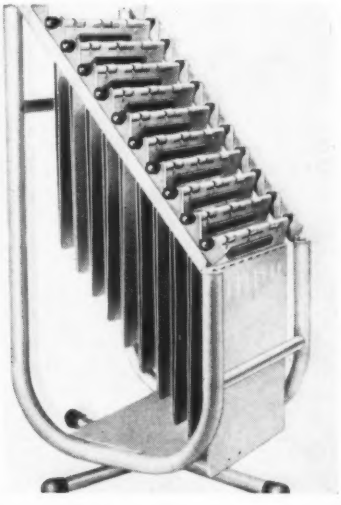
A modification of the standard Jackson tube, the Morch Swivel Tracheostomy Tube has swivelling T-piece at the top to ensure dependable connection between the tube and the respirator. Airway is not reduced at any point, and free swivel action does not permit appreciable leakage of air. V. Mueller & Co., 330 S. Honore St., Chicago 12, Ill.



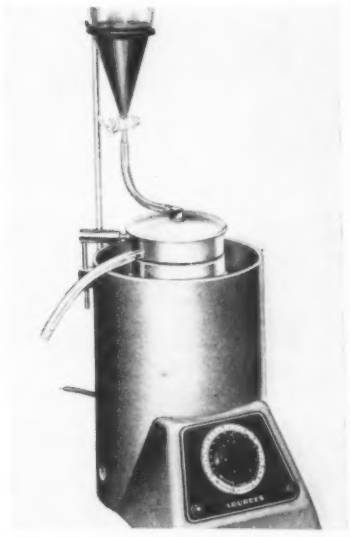
620. Louvered door
New extruded, anodized aluminum louver is exclusive, built-in feature of Chemclad plastic-laminate faced doors. "Sight-proof" louver or door grille incorporates special inverted "Y" design for added stability and easy cleaning. Anodized aluminum construction resists wear. Grilles are centered in the door openings with matching aluminum stops for uniform appearance on both sides. Furnished in any size desired. Bourne Manufacturing Co., 1573 E. Larned St., Detroit 7 , Mich.

621. Boil-proof funnel
A king-size 32-ounce funnel molded of high-density polyethylene for boil-proof, unbreakable utility, is now available. Large 6¾" diameter with ½" flow rounds out a line of five all-purpose sizes: two-, four-, eight- and 16- and 32-ounce capacities. All are boil-proof, dent-proof, unbreakable; unaffected by heat of dishwashers, juices, alcohol, acids, gasoline, oil, chemicals. Seamless, smooth surfaces have positive flow-fast air venting on four sides. Heavy rim with tab for convenient handling, hole for hanging. All in natural color, with 16- and 32-ounce sizes also in copper. Columbus Plastic Products, Inc., Columbus, O.

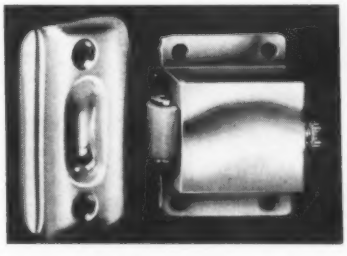
622. Elevation block
New elevation block for use in elevating either head or foot of bed in cases of shock, cardiac condition, fracture, and other conditions. Block is light, but extremely strong and stable due to its conical design and all-metal construction. The cap is concave in shape to receive any style caster. Block is vinyl covered. Minimum storage space is needed, as any number of blocks can be nested. Available in six-, eight-, and ten-inch heights. Zimmer Manufacturing Co., Warsaw, Ind.



623. Chart rack
Chart racks with a "new turn" are available. The Beam-Matic Chart Rack revolves in its own diameter of 13 inches. It makes charts accessible from either side of the desk, as well as from any angle. The rack is all aluminum of tubular construction; anodized finish with 360° turntable action. Made in two sizes to accommodate standard 9"x12" chart holders or longside hinge 12"x10" chart holders. Other models. Beam Metal Specialties, Inc., 25-11 49th St., Long Island City 3, N. Y.

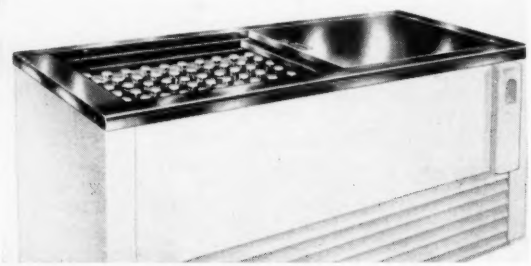


624. Bench-top centrifuge
New, versatile bench model superspeed centrifuge incorporates a built-in safety shield and accommodates five interchangeable rotors for batch or continuous flow separations. All five heads may be spun at low or high speed to a maximum of 17,000 RPM and forces as great as 35,000 x G. Two are of conventional angle type (34°) with capacities of 400 ml. (5 x 50 ml.) and 360 ml. (24 x 15 ml.). Both permit use of adapters for the use of smaller tubes to one ml. size. Another is a new zonal separation rotor with an 80° angle and with a capacity of 112 ml. (16 x 7 ml.). The other two rotors are for continuous flow separation, and all are fitted with removable polyethylene liners. Lourdes Instrument Corp., 53rd St. and First Ave., Brooklyn 32, N. Y.

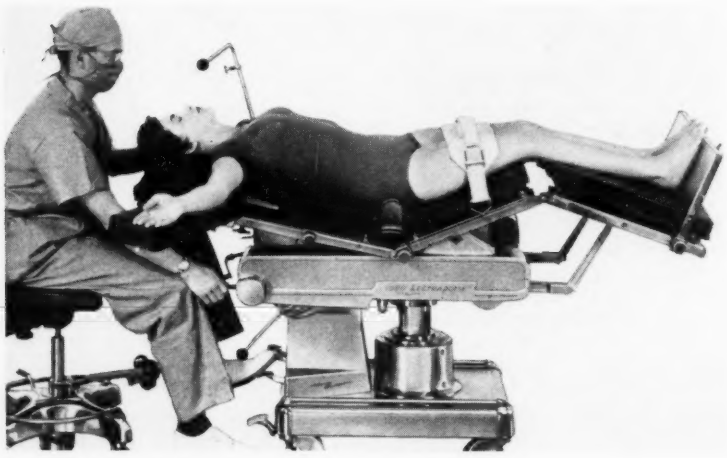


625. Roller latch
Two new economical roller latches for holding closet and other interior doors closed have stainless steel functional parts. Model shown can be surface mounted; the other model is designed for mortising into the top or side rail. In all finishes with combination wood or metal screws. Glynn-Johnson Corp., 4422 N. Ravenswood Ave., Chicago 40, Ill.

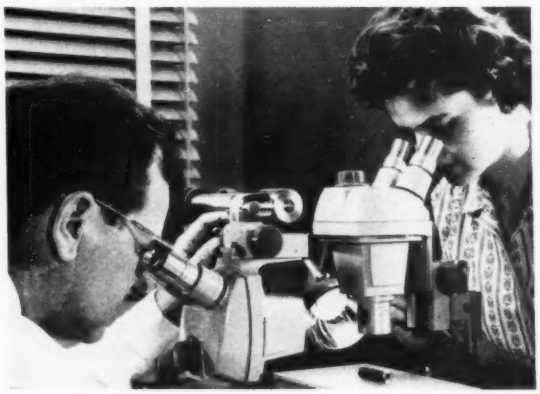
626. Bedfast rinser
New Bedfast Rinser, a plastic device that fits comfortably under a patient's head, takes the trouble and strain out of washing a bedridden patient's hair. Prevents suds, water, or mess soiling the bed, and is much easier on nurse and patient. Adequate amounts of water may be used as it drains off in a convenient receptable set at the side of the bed. Also useful for dressing head injuries and for ear irrigations. R. D. Grant Co., 761 Hippodrome Bldg., Cleveland 15, O.



627. Wet-dry bottle cooler
New sliding-door beverage cooler is storage and dispensing unit. Designed for dry or wet cooling of bottled and cased beverages with automatic control, has sealed condensing unit for trouble-free refrigeration. Galvanized exterior is free of obstructions; top and edging of stainless steel. Decapper and cap catcher on the front panel. Extruded copper tubing in direct contact with tank, coupled with 2½" Fiberglas insulation, produces cooling. Holds 600 half-pint milk cartons, 180 seven-ounce bottles. Nor-Lake, Inc., Hudson, Wis.



628. Emergency lab repairs
A 16" long precision machine lathe that combines up to 10 power tools in one small unit, enables laboratories to make emergency repairs and their own replacement parts. The Unimat machine combines in itself a lathe, drill press, tool and surface grinder, vertical milling machine, detachable hand drill and a polishing and grinding machine. Changeovers for different uses can be made easily and quickly. Its 11-speed drive system provides from 255 r.p.m. to 4,000 r.p.m., operating on regular AC or DC 115 volt current. Basic unit includes a complete lathe bed with headstock and tailstock and cross-slide assemblies, a 1/15 h.p. motor, 3-jaw universal chuck, ½" drill chuck, face plate, lathe dog, grindstone arbor, tool post, two dead centers, upright steel post, wooden storage chest, instruction manual. Chicago Apparatus Co., 1735 N. Ashland Ave., Chicago, Ill.



629. Training microscope
New microscope which permits both instructor and trainee to examine a specimen at the same time includes two standard StereoZoom microscopes and two accessories—a 0.5x lens attachment for greater working distance and a vertical illuminator which acts as a beam splitter so both viewers see the same field with equal clarity. Continuous range of power provides maximum balance of magnification. Each microscope can be used independently, or can be assembled into the teaching or advanced consultation unit with common attachments in a matter of minutes. Scientific Instrument Department, Bausch & Lomb Incorporated, Rochester 2, N.Y.

630. Lectrapoise table
New power-controlled operating table features instant-response positioning through the full posture range by a touch of simple, positive dual safety controls located at the head of the table. These quickly maneuver table through side, flex, reflex, foot and back positions, as well as Trendelenburg, reverse Trendelenberg, elevation and lowering. Full-length x-ray penetrable top permits radiography during surgery; quick-grip conductive rubber mattress pad clings to four-section top through all positions. Double-clamp leg-holder sockets will not fall off during surgery and provide assured, positive locking. American Sterilizer Co., Erie, Pa.

Carolina

MULTI-LAYER

COMBINATION PADS AND ROLLS

Absorb More . . . Hold More . . . Last Longer

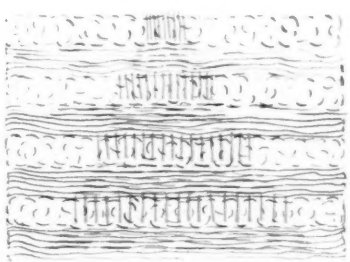
Carolina combines the two most efficient absorptive materials — cotton and cellulose — into a pad guaranteed to provide greater comfort for the patient, greater economy for the hospital.

Alternating several layers of cotton and cellulose makes a more effective pad with the best features of both products.

The bottom layer is of *non-absorbent* cotton for further diffusion of drainage. It is practically leak-proof — helps prevent staining of bedding and garments, makes each pad last longer in use.

This schematic drawing shows the action of Carolab Combination Pads—
cotton has a *retentive* absorption
cellulose has a *capillary* absorption

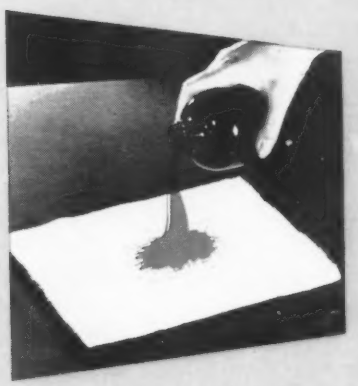
The combined action of "holding" and "spreading" diffuses the drainage throughout the pad, provides—
maximum absorption
maximum time in use



COMPLETE RANGE OF SIZES. WRITE FOR SAMPLES, PRICES, INFORMATION.

ALL-ABSORBENT PADS same as above, alternating layers of cotton and cellulose, but without non-absorbent cotton backing, are also available in all sizes.

Try This Test!

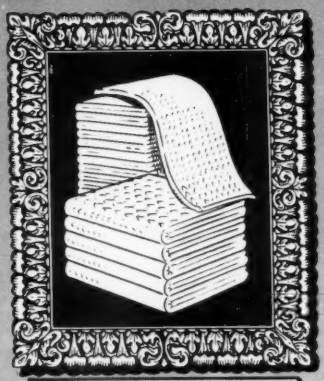


CAROLINA ABSORBENT COTTON CO.
(DIVISION OF BARNHARDT MFG. CO., INC.)
CHARLOTTE 1, NORTH CAROLINA

MANUFACTURED WHERE GROWN

Carolab
Hospital Supplies

PILLOW CASES & SHEETS

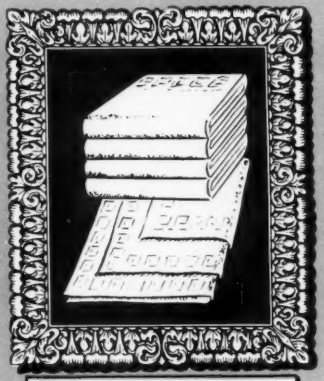


QUILTED PADDING & PADS

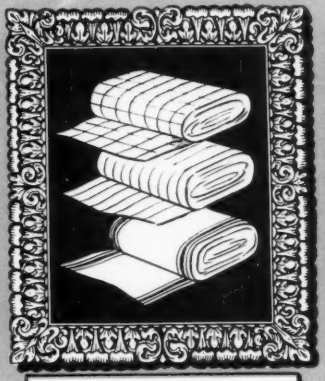
TOWELS; HAND, NAME, TURKISH

CRIB BLANKETS

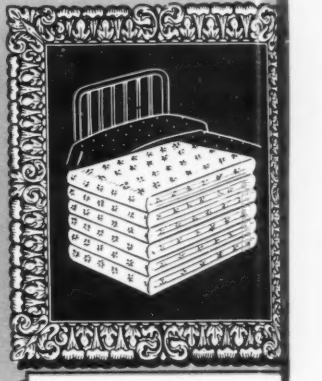
BASSINET LININGS



BATH MATS



TOWELING



BED SPREADS

GALLERY OF CAROLINA CONTRIBUTIONS TO HAPPIER HOSPITAL ADMINISTRATION

Picture your hospital textile needs—and call for Carolina. Not only will the Carolina representative—or home office—be happy to take care of your needs, but you can count on prompt shipment, careful attention to details, and a fair price.

The Carolina Gallery shown above pictures only a few of the items Carolina regularly supplies to hospitals Our textile line is complete, and tastefully selected with the patient also in mind. Our Surgical dressings are quality products, designed for service and economy. If you do not have a complete set of Carolina catalogs at your finger tips, write for a copy.

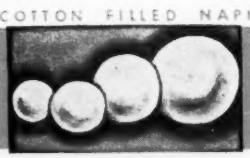
CAROLINA ABSORBENT COTTON CO.

(Division of Barnhardt Mfg. Co.)

CHARLOTTE, N.C.

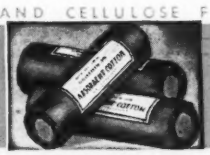
ALSO AVAILABLE: COTTON FILLED NAPKINS, GAUZE WRAPPED, AND CELLULOSE FILLED NAPKINS

Other Carolina Products



Cotton balls

Combination pads and rolls



Absorbent cotton

Carolab Hospital Supplies

HOSPITAL INDUSTRIES ASSOCIATION HIA

MANUFACTURED WHERE GROWN

631. Shrub and evergreen winterizer

New liquid plastic compound winterizes and wraps a protective coating around shrubs and evergreens, keeping them safe from cold, burning winds and snow during the winter months. The new product, FX-2 Plant Protector, is a concentrated, non-toxic, emulsifiable, plastic compound which forms a clear, glossy, flexible film on the plants, preventing loss of moisture, while still permitting the plants to breathe. The coating is thrown off as normal plant growth is resumed in the spring. Non-flammable, it also reduces fire hazard. Available in a liquid concentrate; one pint makes three quarts. FX-Lab Company, 77 Okner Parkway, Livingston, N.J.

632. Multicare unit

New unit consists of table top with storage below; wall service panel; cubicle curtain and wardrobe unit. Unit extends from the wall adjacent to patient's normal bed position; may be used in a two-bed unit or adapted to a single room. Bedridden patient has access to room controls, direct communications, and personal needs available normally only to the nurse. Bed may be moved away from unit for intensive treatment, in which case nurse has access to service controls, equipment and table space. Features include oxygen and vacuum outlets; lights and light intensity control; bedpan, urinal, wash basin, emesis basin storage; hot and cold water faucet in sink; window and cubicle curtain control; electrical outlet and intercom system. Telephone, call system, clock, radio and TV controls, and fresh air outlet all self-service. St. Charles Manufacturing Co., St. Charles, Ill.

633. Wall and ceiling systems

Two new self-supporting upper wall and ceiling systems use plastic-surfaced Marlite paneling. Ceiling system utilizes 2′ x 4′ panels grooved on all four sides to fit into grid moldings suspended from unfinished ceiling. Upper wall system panels are 2′ wide and available in 5-to-8-foot lengths, have grooved vertical edges that fit into moldings to give the system its rigidity. It is easy to switch the panels to another wall, or combine colors for accent area. Plastic surface, highly resistant to hard wear, can be washed and never requires refinishing. Quickly installed with minimum labor costs. Marsh Wall Products, Inc., Dover, O.

634. Glassware washer

New medium-capacity glassware washer, designed for smaller laboratories, has same perforated stainless-steel baskets as the deluxe washer. Will wash a wide variety of labware, from microscope slides to Erlenmeyer flasks, holding them in just the right position for efficient cleaning, yet preventing any slipping and jostling that could result in broken glass. Holds four baskets. There is a steam-heated and an electrically-heated model. Operator does not have to open, close or adjust steam, water and drain valves by hand, the entire washing program being electrically controlled by setting a selector switch. Any stage of the wash cycle can be repeated at any time; a dial thermometer shows when the water is at the proper temperature. Finished in chemical-resistant white enamel, washer is 36″ high, 35″ wide, and 22″ front-to-back. Fisher Scientific Co., 444 Fisher Bldg., Pittsburgh, Pa.

635. Electrical wiring system

Complete over-the-floor wiring system fabricated to your own needs is available. A sketch showing where outlets are needed allows manufacturer to build a complete custom electriduct wiring system ready for you to place on the floor and plug into a wall outlet. Nearly flat rubber encased wiring eliminates danger of tripping, eliminates costs of tearing up floor for installation. Electriduct hugs the floor inconspicuously; casters roll over it easily. Electriduct Div., Ideas, Inc., 214 Ivinson Ave., Laramie, Wyo.

to serve you better, faster . . .

THREE NEW
WILL ROSS, INC. BRANCHES

SEATTLE
TACOMA
CINCINNATI

WILL ROSS, INC.

General Offices: Milwaukee 12, Wis.
Atlanta, Ga. • Baltimore, Md.
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PRODUCTS YOU CAN TRUST FROM PEOPLE YOU KNOW

For further information see postcard opposite page 138.

Personally Speaking

The newly elected president of the American Association of Inhalation Therapists is Joseph Klocek, R.N., in the center of this picture. On the left are new members of the board of directors: Mrs. Vivian Curtis, R.N., Colorado, and Walter Palmer, Pennsylvania. To the immediate right of Mr. Klocek is Jerry Keydenberk, Michigan, and (far right) Walter Jones, California, also new members of the board.

Albert Andrews – has been named acting director, Ionia County Memorial Hospital, Ionia, Mich., succeeding **Patrick B. Monaghan,** who resigned to go into other hospital work. Mr. Andrews was formerly business manager of the hospital.

Ernest Bors, M.D. – chief, spinal cord injury service, Long Beach (Calif.) Veterans Administration Hospital, has been cited by the VA for outstanding service to paraplegic victims. The spinal cord injury treatment program at the Long Beach VA Hospital was developed under his leadership.

Rena E. Boyle, Ph. D.–has been appointed director, department of baccalaureate and higher degree programs, National League for Nursing. Miss Boyle was formerly nurse consultant, division of nursing, U.S. Public Health Service, Washington, D.C.

Lawrence Brett – has been named administrator, North Miami (Fla.) General Hospital, and will assume his new duties immediately, a year in advance of the actual opening of the new hospital. He was formerly superintendent, Bethesda Hospital, Cincinnati, O.

James E. J. Brunsgaard, Jr. – has been named executive housekeeper, University Hospital and Hillman Clinics, University of Alabama Medical Center, Birmingham. He formerly held a similar position at New York University Hospital.

Robert J. Conner–has joined the faculty of the graduate program in hospital administration, University of Chicago, as director of research for the program and assistant professor in the graduate school of business. He was formerly a faculty member at Johns Hopkins University, Baltimore, Md., and participated in the operations research studies at Johns Hopkins Hospital.

John H. Daniels, Jr. – has been named director, North Shore Hospital, Manhasset, New York. He has been acting director since January, 1960.

William A. Decker, M.D.–has been appointed clinical director, Kalamazoo (Mich.) State Hospital. He was formerly assistant medical superintendent, Pontiac (Mich.) State Hospital.

Margene O. Faddis – has been appointed professor of nursing, Western Reserve University, and chief administrative officer in nursing, Benjamin Rose Hospital, Cleveland, O. Miss Faddis has been on the WRU faculty since 1929, and is co-author of several nursing textbooks.

Mrs. Lula Owl Gloyne, R.N. – has retired as company nurse for the outdoor drama "Unto These Hills," given each year at Cherokee, N. C. Mrs. Gloyne, a Cherokee Indian, received her training at Chestnut Hill Hospital, Philadelphia. Prior to her eight years as company nurse, she had done mission work among the Sioux Indians, and had been a school and field nurse.

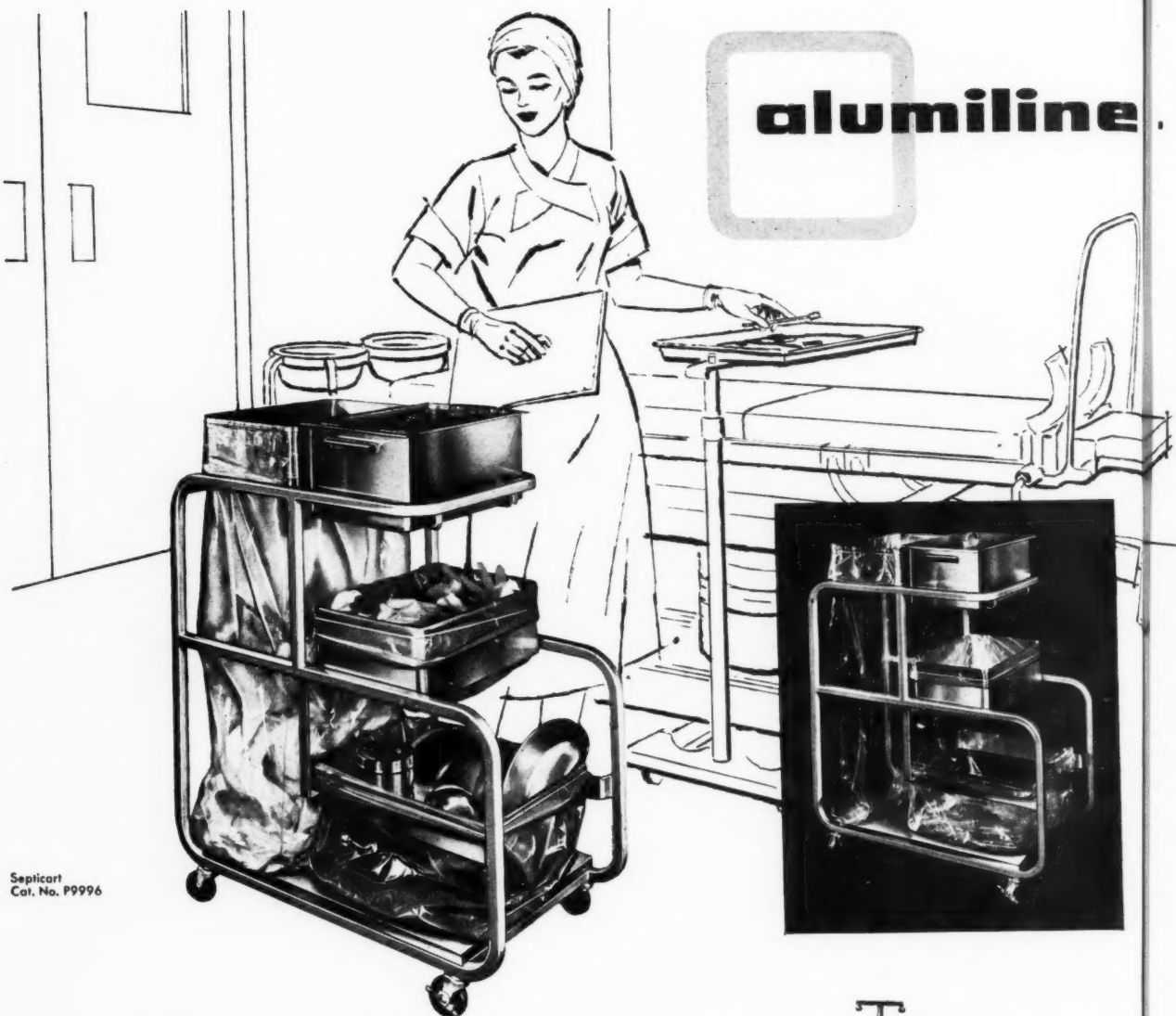
Mrs. Ann Leggett Sims will succeed Mrs. Gloyne.

Lois E. Gordner, R.N. – has been named chief, Research and Resources Branch, Division of Nursing, U. S. Public Health Service, Washington, D. C. In the new post she will direct a staff conducting research in methods of patient care, nursing education, and optimum use of nursing personnel.

James B. Johnson, (r) – has been elected president, American Society of Plastic and Reconstructive Surgery, succeeding **Kenneth L. Pickrell, M.D.,** chairman, department of plastic surgery, Duke University Medical School, Durham, N. C. Dr. Johnson is assistant clinical professor of surgery (plastic), University of Southern California Medical School, Los Angeles.

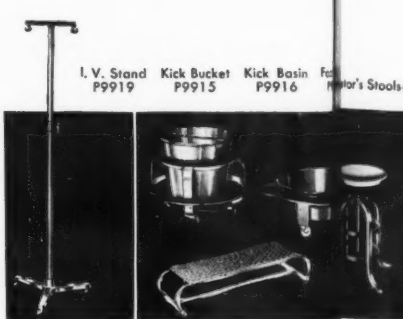
(Continued on page 128)

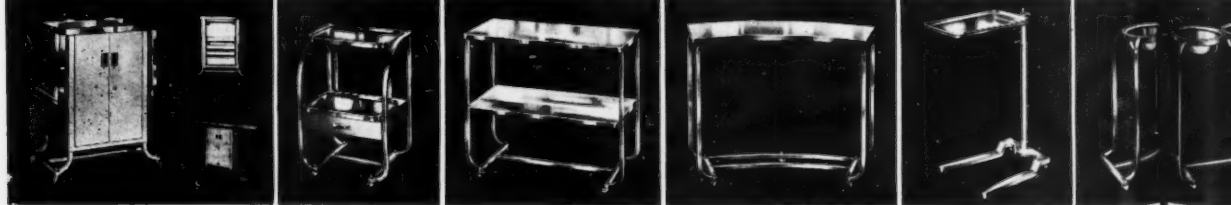
alumiline . .



Septicart
Cat. No. P9996

***Isolate Contaminated Articles in the O. R.*—New Aloe Septicart** is a mobile receptacle for the systematic collection, immediate isolation, and removal of all contaminated material in the operating room. It is easily moved to points of collection and quickly withdrawn on easy-rolling casters. Septicart is fitted with a leak-proof polyethylene bag of large capacity to hold soiled linens. Solution tank of stainless steel has removable stainless steel basket to receive all discarded instruments. Below the instrument tank is a receptacle for soiled dressings, etc. to be discarded; fitted with a leak-proof polyethylene fold-over bag. Below the glove receptacle is a utensil receptacle, also fitted with a leak-proof polyethylene bag for easy removal. The red color of the bags serves as a warning code denoting contamination to all who handle.





. . . Meets Today's Most Rigid O. R. Standards

Aluminum and stainless steel for superior conductivity, easy-to-clean, aseptic construction. Distinctive style, superbly functional

Alumiline operating room furniture is an Aloe exclusive development. Designed and fabricated entirely in our own factory, it has been given special features which make it uniquely fitted for use in the surgery.

Distinctive—Design-Coordinated

The graceful, distinctive, square-tube frames provide the strength and pleasing unity of design which are characteristic of the entire line. Alumiline is completely functional—every unit has been developed to serve a definite purpose with maximum efficiency. As a group, Alumiline is design-coordinated to meet the stringent functional demands of modern surgical technics.

Maintenance-Free Construction

Stainless steel and aluminum are combined to give permanent protection against corrosion and rust. Sturdy, welded construction assures lasting rigidity; exclusive H-frame cross bracing at the lower part of the unit provides unusual strength. In contrast to ordinary bolted construction, Alumiline will remain rigid permanently and will therefore last many times longer under the hard conditions of daily institutional use.

Aluminum parts are chemically oxidized and finished to retain a permanently smooth surface that is easy to clean and will never tarnish in normal use.

The stainless steel used in Alumiline has a No. 4 Satin finish, which reduces glare and shows no finger prints. The light weight of Alumiline permits easier handling; causes less damage to hospital floors.

Electrically Conductive

Because of superior conductivity, aluminum and stainless steel are the preferred materials for use in the O. R. Alumiline in the operating room forms an important link in your chain of precautions against explosion hazards of static electricity.

With the naturally conductive aluminum and stainless steel construction, conductive casters complete the cycle of safety measures that make Alumiline safe for use in the presence of anesthetic gases.

Write or see your Aloe Representative for complete information.

OUR 100TH YEAR

Aloe

ALOE

World's Foremost Hospital Supplier

A. S. ALOE COMPANY
DIVISION OF BRUNSWICK CORPORATION
1831 Olive Street, St. Louis 3, Mo.

FULLY STOCKED DIVISIONS COAST-TO-COAST

FINEST FOR GENERAL SURGERY

BROWN MILLED SURGEONS' GLOVES by SEAMLESS

Brown Milled Surgeons' Gloves by Seamless are made of the finest Para rubber. They are gloves that cling to the hand and fingers . . . yet never grab with a tight grip. There's no loss of circulation, accelerated fatigue or loss of sensation. These are gloves acclaimed the world over for providing maximum sensitivity and maximum comfort compatible with long glove life. And hardly less important —their hypoallergenic properties minimize the possibility of contact dermatitis.

To give your surgeons the best, order SR-829. "Kolor-Sized" and Banded.

HOSPITAL DIVISION
THE SEAMLESS RUBBER COMPANY
NEW HAVEN 3, CONN.

PERSONALS

(*Continued from page* 125)

Ira Lane — has been appointed executive director, Tennessee Hospital Council, Nashville. He was formerly director of hospital-physician relations for Louisiana Hospital Service, Inc.

Francis A. Manfred — has been appointed administrator, Woodside Receiving Hospital, Youngstown, Ohio. He was formerly pharmacist-in-charge, McDowell (Ky.) Memorial Hospital, and is a recent graduate of the Xavier University program in hospital administration.

Col. James T. McGibony, MC — director of plans, supply and operations, Army Surgeon General's Office, Washington, D.C., has been appointed to a three-year term on the American Hospital Association's Council on Professional Practice.

Joe Meyer, Ph. D.—has been appointed chief, medical research laboratories division, Veterans Administration, Washington, D.C. He was formerly chief of the medical research laboratories, Houston (Tex.) VA Hospital and associate professor of biochemistry, Baylor University College of Medicine.

Stephen M. Morris — has been named administrator, Good Samaritan Hospital, Phoenix, Ariz., filling the post vacated by the death of **Guy Hanner.** Mr. Morris was formerly assistant administrator at the hospital.

At the same hospital, **Richard E. Sandford** and **Raymond W. Leitner** are now assistant administrators. They were formerly administrative assistants.

James H. Moss — is the new administrator, Bethesda Hospital, Cincinnati, Ohio. He was formerly administrator, Riverside Hospital, Toledo.

Mother Mary Anne — has been appointed director, St. Joseph Hospital, Wichita, Kan. She was formerly director of hospitals for the Sisters of St. Joseph.

John A. Nelson—has been named assistant director, Metropolitan Hospital and Clinics, Detroit, Mich.

Virgil W. Nelson — has been appointed administrator, North Shore Hospital, Winnetka, Ill., to fill the vacancy left by the death of **Laurence B. Hutson.**

Mr. Nelson was formerly executive director, Lutheran General and Deaconess Hospitals, Chicago.

Oglesby Paul, M.D.—has been installed president, American Heart Association, for 1960-61. He is clinical associate professor of medicine, University of Illinois College of Medicine, Chicago, and attending physician, Chicago's Presbyterian-St. Lukes Hospital. Dr. Paul succeeds **A. Carlton Ernstene, M.D.,** chairman of the division of medicine, Cleveland Clinic, in the office of AHA President.

John B. Perkins — has been named administrator, Rehabilitation Institute of Chicago. He was formerly treasurer and business manager of the Christian Herald Association, Inc., New York.

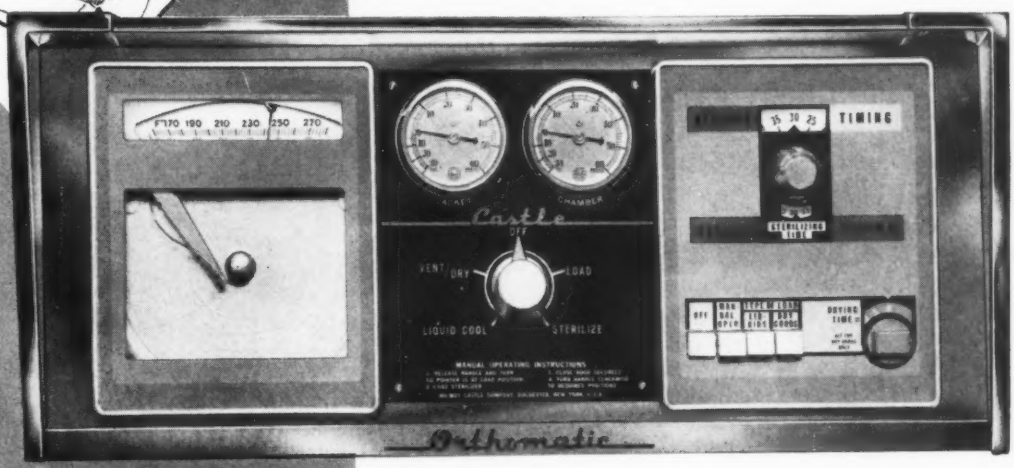
Edward P. Robinson—has been appointed assistant director, Louis A. Weiss Memorial Hospital, Chicago. Mr. Robinson, formerly administrative assistant, Western Pennsylvania Hospital, Pittsburgh, is the first-prize winner of this year's TOPICS editorial competition for hospital administration graduate students.

R. Walter Schlesinger, M.D.—has been appointed chairman of the newly-formed division of virology, Society of American Bacteriologists. Dr. Schlesinger is director, department of microbiology, St. Louis (Mo.) University School of Medicine.

Sister M. Callesta, formerly with St. Agnes Hospital, Fresno, Calif., succeeds **Sister M. Bertrand** as comptroller upon Sister Bertrand's appointment to the new Holy Cross Hospital, San Fernando, Calif.

(*Continued on page* 131)

NEW SPEED and SAFETY in Sterilization



WITH *Castle* ORTHOMATIC

...the modern pushbutton sterilizer control system

New unprecedented speed with new sterilizing safety—all at the touch of a button—that's Orthomatic, Castle's revolutionary new sterilizer control system. Central Supply, Surgery, Laboratory, Milk Formula Room—wherever you sterilize—the pushbutton Orthomatic System will out perform any sterilizer you are now using.

Find out how Castle Orthomatic can bring your hospital safer, more efficient sterilization, at less cost. Also available: Thermatic "60" and Manual Control systems.

Look at these EXCLUSIVE features:

1. **DYNAMIC AIR ELIMINATION**—Automatic pulse system purges air, assures rapid, complete stream penetration.
2. **HIGH-SPEED JET HEATING**—Raises loads to sterilizing temperature 50-100% faster than conventional sterilizers.
3. **DIFFERENTIAL LIQUID COOLING**—Cools three times faster than conventional sterilizers. It's automatic with the touch of a button!
4. **QUICK-SET TEMPERATURE CONTROL**—A finger's touch sets temperature anywhere from 212°F to 270°F.
5. **PUSH-BUTTON CONTROL**—No involved settings! A touch of a button and sterilization is programmed from start to finish.

Castle **LIGHTS AND STERILIZERS**

WILMOT CASTLE CO., 1801 E. HENRIETTA RD.,
Subsidiary of Ritter Company Inc.
ROCHESTER 18, N.Y.

For further information see postcard opposite page 138.

THE DRAMATIC—ALL POWER

Lectrapoise

OPERATING TABLE

with INSTANT POWER-RESPONSE

In every sense Amsco's remarkable new "Lectrapoise" Operating Table answers the surgeon's need for smooth power-positioning . . . ultimate in surgical convenience.

A number of new engineering features set the "Lectrapoise" above all other operating tables . . ."power-response" positioning . . . quick-grip mattress pad . . . full length X-ray top . . . new clamp-on legholder sockets . . . emergency positioning . . . and complete standard accessories.

Every surgeon, anesthesiologist and every hospital will appreciate the significantly finer qualities of the "Lectrapoise." For once they power this compact table through its surgical postures, there can be no substitute.

Write for fully illustrated 26-page brochure TC-299.

Simple Head End power controls enable the anesthesiologist to articulate the "Lectrapoise" instantly — smoothly. No other table offers this surgical convenience and maneuverability.

AMERICAN STERILIZER

ERIE • PENNSYLVANIA

World's largest designer and manufacturer of Operating Tables, Lights, Sterilizers and related equipment for hospitals

PERSONALS
(*Continued from page* 128)

Sister M. Peter Jane – has been named director of nursing, Holy Cross Hospital, Salt Lake City, Utah, replacing **Sister M. Theodore,** who will do graduate studies in nursing service administration.

A. B. Smith, M.D.–has been appointed superintendent, Matty Hersee Hospital, Meridian, Miss., succeeding **Wendell H. Cook, M.D.**

Stephen M. Smith, M.D.–has been appointed director, Gracie Square Hospital, New York City, succeeding **Leonard Cammer, M.D.** Dr. Smith has retired from the United States Navy with the rank of captain. He was district medical officer for the Third Naval District and Sea Frontier.

Sidney N. Soll, M.D.–chief of medicine, Mount Sinai Hospital, Los Angeles, Calif., has accepted appointment as medical director, outpatient clinics.

Rodney P. Sperry–has been named director, building services, for the new DeKalb General Hospital, Decatur, Ga.

John K. Springer–has been named assistant administrator, Mary Hitchcock Memorial Hospital, Hanover, N. H., succeeding **David Boyd,** who is new administrator, Mandnock Community Hospital, Peterborough, N. H.

J. B. Storrs–has been appointed manager, American Fork (Utah) Community Hospital, upon the resignation of **Mrs. Maude Humphries, R.N.** Mr. Storrs was formerly assistant superintendent, Utah State Training School, American Fork.

Ray E. Trussell, M.D.–has been elected to the board of directors, Associated Hospital Service of New York. Dr. Trussell is director, School of Public Health and Administrative Medicine, Columbia University, New York City.

W. Austin Turner – has been named assistant administrator, UCLA Medical Center, Los Angeles, Calif. He was formerly assistant administrator, Marin General Hospital, San Rafael, Calif.

Mrs. Addie Weinstein – has been named director of volunteers, Louis A. Weiss Memorial Hospital, Chicago.

Lilyan C. Zindell–has been named administrator, Bethesda General Hospital, St. Louis, Mo., succeeding **Jack Kindig,** who resigned to become administrator, Naples Community Hospital, Naples, Fla.

New Officers

The Hospital Administrative Council of Nevada's officers for 1960-61 are **Carroll W. Ogren,** assistant administrator, Washoe Medical Center, Reno, president; and **Mildred Sebbas, R.N.,** administrator, Pershing General Hospital, Lovelock, president-elect.

ELIMINATE INDIFFERENT PLATE BURNS IN ELECTROSURGERY!

THE NEW BIRTCHER SAFETRODE (trade mark)

Now . . . make burns by indifferent electrode during electrosurgery an impossibility. The Birtcher Safetrode is a large, flat condenser (25½" x 15½", molded in autoclavable neoprene) that matches the capacity of the patient's body and induces energy into the patient. It completely eliminates the antiquated metal indifferent plate which nurse and doctor must continually check for proper fit and contact—no need for messy jellies either. Simply place the Birtcher Safetrode on the operating table in a position approximating the trunk of the body with the usual sterile sheet draped over it. Safetrode does not depend on skin contact for proper functioning. Patient may be moved at will, in any position, with no reason for concern. Thoroughly tested and enthusiastically approved by surgical staffs of leading hospitals. Fits every make and model of electrosurgery machine. Specify make and model when ordering so proper cord tips can be fitted. Order a Birtcher Safetrode for every electrosurgical unit right now. **Stop burns . . . stop lawsuits!**

IF YOUR DEALER CANNOT SUPPLY YOU, USE THIS COUPON

The new Birtcher Safetrode offers new safety for patient, doctor and hospital. You may anticipate 25 years of trouble-free use. Guaranteed to please or your money back. Fill out and mail today!

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Hospital _____

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City _____ Zone _____ State _____

American Cyanamid wins packaging award. (See story below.)

TRADE TOPICS . .

American Cyanamid Wins Packaging Award

A new method of packaging sterile surgical sutures developed and marketed successfully by the surgical products division of American Cyanamid Co. has won the corporate award of the Packaging Institute.

Pictured here are officials of the Packaging Institute and American Cyanamid following presentation of award plaque: (l. to r.) George Kaufman, president, Packaging Institute; J. R. Brown, Jr., assistant general manager, surgical products division; Mary V. Schwendeman, the division's nursing consultant; and Jules Kleiner, SPD technical director.

Award-winning method utilizes hermetically sealing bonded polyethylene-polyester material to permit individual sterile suture packaging in unbreakable, transparent envelopes that are over-packed in light, compact cardboard shelf cartons. Sutures are sterilized by ethylene oxide gas.

Becton, Dickinson Forms New Division

A new research and marketing organization for laboratory services has been formed by Becton, Dickinson and Co. Called B-D Laboratories, Inc., the new company unites the production, financial control, and research activities of three subsidiaries: Baltimore Biological Laboratory, Cappel Laboratories, and Falcon Plastics.

Theodore J. Carski is vice-president and chairman of the board of the new division. Arthur S. MacConnell is vice-president. Other new officers are: W. H. Gottschalk and R. G. Speiser, vice-presidents; T. de St. Phalle, treasurer; and H. A. Supplee, secretary. Director of technical services is Paul A. Rohde.

Falk II New Baxter Lab Chairman

Ralph Falk II —has been elected chairman of the board of Baxter Laboratories, Inc., to succeed his late father, Ralph Falk, M.D., company founder who died November 2.

The late Dr. Falk, who was a surgeon as well as a pioneer in intravenous feeding, founded Baxter in 1931. His widow, Mrs. Marion Citron Falk, has also been elected a director of the company.

Mr. Falk II has been senior vice-president of Baxter and before that he was president of Baxter Laboratories of Canada, Ltd.

New Appointments At Cutter Labs

Cutter Laboratories has announced the appointment of Raymond Abele an assistant to the treasurer with the company. Mr. Abele, who was formerly assistant distribution manager, will replace John Merrill, who was recently named controller for Olympic Plastics Co., Inc., a Cutter affiliate.

Chad Kelley, formerly Great Lakes division sales representative, is now division manager for Cutter's south central division. Joseph G. Loesl will assume Mr. Kelley's former position.

In addition, Ronald R. Rucker has been appointed a field sales representative for the company's midwestern division.

Pfizer Dedicates New Research Lab

Macrobiological, chemical, and biochemical research units have been consolidated in the newest and largest scientific research center of Chas. Pfizer & Co., Inc.

Dedicated last October, the 177,000 sq. ft. structure is on a 19-acre landscaped site at Groton, Conn., and will house some 400 scientists, technicians, and supporting personnel.

Nearly 1,000 persons attended the day-long dedication and heard speeches by Dr. Irvine H. Page, director of research at Cleveland Clinic Foundation; Abraham A.

Ribicoff, governor of Connecticut; John E. McKeen, president and chairman of the board of Pfizer; and Jasper H. Kane, the company's vice-president of research and development.

Realignments at Merck Sharp & Dohme

Dr. Thomas J. Macek has been appointed director of pharmaceutical research and development in the research laboratories, Merck Sharp & Dohme, division of Merck & Co., Inc., succeeding Dr. Paul W. Wilcox, who had resigned. Dr. Alan Gray has been appointed manager of biological development.

Dr. Gerald Polli was named manager of fluid ointment and manufacturing, pharmaceutical manufacturing area.

Charles W. Pike occupies the newly-created position of director of operations, with responsibility for biological and pharmaceutical operations in the firm's West Point and Philadelphia plants.

Gordon R. Klodt has been appointed manager of the new northeastern sales region, and Donald E. Stewart, Chicago district sales supervisor. George H. Nice and Joseph H. Cassell, Jr., have become branch managers in Chicago and Columbus, O., respectively. Mr. Nice succeeds James M. O'Hara, who has resigned, and Mr. Cassell succeeds Mr. Nice in his former office.

News Items

Walter N. Plaut—has been elected president and chief executive officer of Lehn & Fink Products Corp. He succeeds his father, **Edward Plaut,** who will continue as a director.

* * *

F. Douglas Lawrason, M.D., dean of the University of Arkansas medical school—has been appointed executive medical director of Merck & Co., Inc. He will be responsible for all the medical activities of the company, including clinical research and clinical evaluation of drugs developed in the company's research program.

* * *

A. S. Aloe—has announced the retirement of **Howard F. Baer** as president. Mr. Baer has been associated with the company for 34 years, and has been president since 1929. As chairman of the board of Aloe and vice-president of the parent corporation, Brunswick, Mr. Baer plans to continue work for Aloe in the fields of expansion, acquisition, and customer relations.

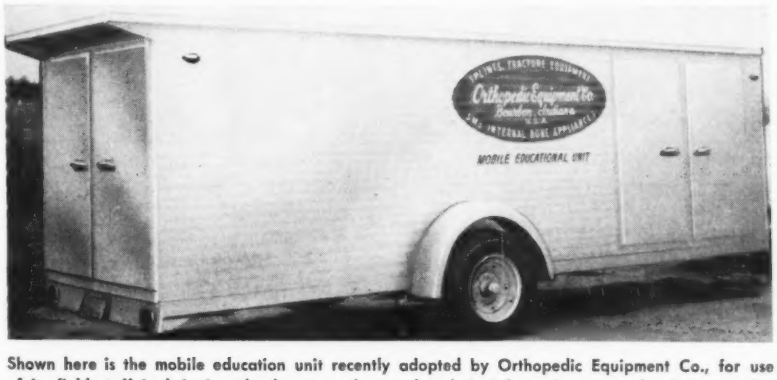
* * *

Milton H. Freeland—a 21-year employee of Abbott Laboratories, has been appointed manager of the newly created chain store sales department. He has been assistant manager of the drug trade department.

* * *

Shampaine Industries' president **H. Robert Shampaine**—has announced the successful completion of a fund-raising campaign for construction of a training and treatment center for alcoholics in St. Louis' Malcolm Bliss Hospital. Mr. Shampaine was chairman of the citizens committee for soliciting funds.

(Continued on next page)

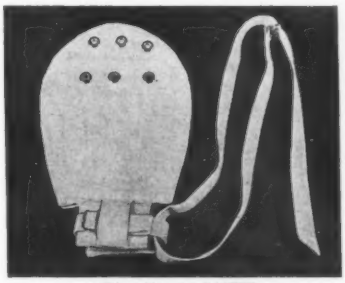


Shown here is the mobile education unit recently adopted by Orthopedic Equipment Co., for use of its field staff in bringing the latest product and technic information to trade shows, professional conferences, and other gatherings. The unit is designed to transport several lighted exhibits, product displays, literature, and booth equipment.

For Patient Protection

The Posey Safety Belt
Prevents patients falling out of bed. Cat. #S-141, $6.45. (Extra heavy construction with key-lock buckles. Cat. #P-453, $19.50 each.)

The Posey "V" Restraint
A good all-purpose restraint to prevent patients from falling or getting out of bed. Particularly good for use on females as it does not irritate busts. Available in Small, Medium, and Large sizes. Posey "V" Restraint Cat. No. V-958. Price $6.90 each.



The Posey MITT
To limit the patient's hand activity. An adjustable strap attached to the mitt and the side rail of the spring determine limit of movement. Can be laundered by ordinary methods. Comfortable and prevents patient's scratching, pulling out catheter, nasal tube, etc. Available small, medium and large.

Cat. No. C-212—(both sides flexible) $6.00 ea.—$12.00 pr.
Cat. No. R-212—(palm side rigid) $6.30 ea. $12.60 pr.

SEND YOUR ORDER TODAY
And Write for Illustrated Literature About Other Posey Hospital Equipment

J.T. POSEY COMPANY
2727 E. Foothill Blvd.
Dept. HT
Pasadena, California

For further information see postcard opposite page 138.

Better Light
where you need it most

with the new Hill-Rom
Bedside Cabinet Lamp

Front view of cabinet with lamp in position.

With this bedside cabinet lamp the doctor or nurse can quickly and easily put the light exactly where it is needed for examination or treatment. The lamp is mounted on the back side of the cabinet and rolls on a track, so it may be easily moved and used on either side of the cabinet as required. It may also be moved entirely out of the way when full access to the top of the cabinet is desired. The shade is well ventilated—will never become hot.

A convenience outlet permits plugging in any electrical appliance used at the bedside.

This lamp is listed by Underwriters' Laboratories.

HILL-ROM COMPANY INC. • Batesville, Indiana

A "hand-some" trophy is Bill Casselman's award from Pioneer Rubber Company for his outstanding sales record in the past year. Mr. Casselman is sales manager of Pioneer's western subsidiary in Los Angeles. Mrs. Marjorie Beamer, in charge of surgical glove sales, presents the trophy, which is a ceramic surgical glove form mounted on polished walnut with an inscription.

Robert A. Hardt, president of Armour Pharmaceutical Co., has been elected an honorary member of the Argentine Pharmaceutical and Biochemical Association.

* * *

H. Lou Gibson – has been awarded the Louis Shmidt award of the Biological Photographic Association for his developing of formulas in photomacrography, work on simple and optimum lighting for photographing medical patients, and his research in infrared medical photography. At the Eastman Kodak Co., medical sales division, Mr. Gibson serves as a technical writer.

* * *

Richard W. Haggerty – will direct the establishment of a Denver, Colo., sales office for the Birtcher Corp., which will cover the mid-mountain states of Colorado, Wyoming and Utah.

* * *

Dr. John W. Coltman – associate director, Westinghouse Electric Corp. research laboratories, has been awarded the Edward Longstreth medal of the Franklin Institute for "his individual research contributions and his guidance of

the research program leading to the development of the "first working X-ray image amplifier device."

* * *

Ernest H. Benton —has been appointed by J. A. Deknatel & Son to represent the company in the province of Ontario, Canada. Mr. Benton spent eight years in the surgical supply field before joining Deknatel.

* * *

Mr. Brown

William R. Brown—has been elected partner in A. T. Kearney & Co. Formerly an associate with the firm, he specialized in hospital and institutional operations. **Joseph R. Ryan** has been elected associate with the firm. A specialist in engineering problems, he has been a member of the staff for several years.

* * *

Leon Talalay – has been appointed technical director, sponge products division, B. F. Goodrich Co.

* * *

Mr. Apfelroth

Sanford Apfelroth – has been named research director, Doho Chemical Corp., Ophthalmos division, succeeding the late **Robert R. Feinstein.**

* * *

Dr. C. R. Roberts – has been elected vice president, National Dairy Products Corp., and appointed president of the company's Sealtest Foods Division.

Lily-Tulip Cup Corp.—has opened a new technical center in Commack, Long Island, N. Y., concentrating all the firm's research and development functions under one roof. The center is co-managed by **Stephen W. Amberg,** director of research and development and **Rufus S. Hovey,** director of manufacturing engineering.

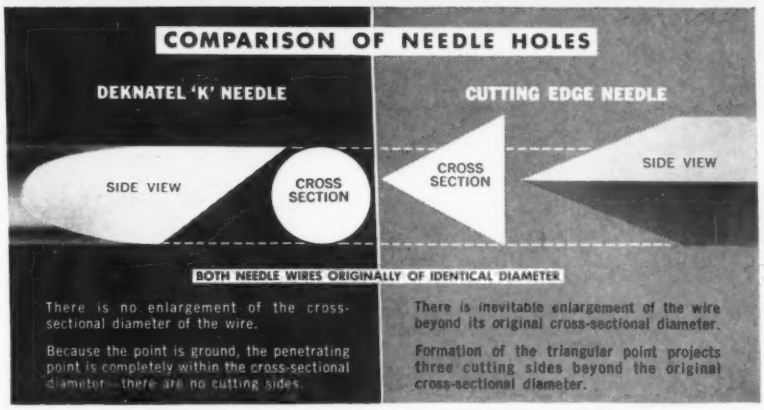
* * *

Donald B. Murray – has been appointed sales manager for G. K. Turner Associates. His former position was sales representative for Bausch & Lomb Optical Co.

* * *

Robert T. Cavanagh – has been appointed general manager, Philips Electronic Instruments, division of Philips Electronic and Pharmaceutical Industries Corp., a promotion from the position of assistant general manager.

WHY SURGEONS SPECIFY
THE ALL-PURPOSE
DEKNATEL 'K' NEEDLE
(U.S. Patent No. 2,869,550)


COMPARISON OF NEEDLE HOLES
DEKNATEL 'K' NEEDLE
CUTTING EDGE NEEDLE
SIDE VIEW
CROSS SECTION
CROSS SECTION
SIDE VIEW
BOTH NEEDLE WIRES ORIGINALLY OF IDENTICAL DIAMETER
There is no enlargement of the cross-sectional diameter of the wire.
Because the point is ground, the penetrating point is completely within the cross-sectional diameter—there are no cutting sides.
There is inevitable enlargement of the wire beyond its original cross-sectional diameter.
Formation of the triangular point projects three cutting sides beyond the original cross-sectional diameter.

The Deknatel 'K' Needle point is a true scalpel, the sharpest penetrating instrument that can be made. The shaft of the needle easily follows this penetrating point. Cutting sides are not needed to facilitate passage of the needle—the hole is therefore that of a taper point needle. In summation, the Deknatel 'K' Needle has all the advantages of both conventional types and none of their disadvantages.

The Deknatel 'K' Needle is neither cutting nor taper needle but an all-purpose combination of both. O.R. preparation is simplified. A single Deknatel 'K' Needle may be stocked instead of the two formerly required: conventional taper and cutting. With this standardization of one for two, there are savings in inventory and storage space.

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DEKNATEL, 96-67 222 Street, Queens Village 29, L. I., N. Y.

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(Please specify type and size desired, such as "Skin, 3-0 Silk")

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HOSPITAL _____ CITY _____ STATE _____

For further information see postcard opposite page 138.

Films, New Literature

640. Master monitor
Six-page brochure on New Surgical Master Monitor, an integrated electronic system for gathering, recording and displaying data on patient condition during and after surgery, is available. Describes in detail how locating all data-processing instrumentation at a central station reduces amount of equipment required for monitoring a number of patients at one time, and eliminates clutter and explosion hazards in operating theater. Epsco, Inc., 275 Massachusetts Ave., Cambridge 39, Mass.

641. Flow-rate calculator
New pocket-size flow-rate calculator for blood or solution infusion sets is a dial-type chart which also contains tips on the administration of fluids and material on pediatric infusions. Formulae given directly below the dial will solve determinations for quantities to be given other than hourly. Abbott Laboratories, North Chicago, Ill.

642. Psychiatric film
A special report on aftercare, tape-recorded during the annual meeting of The American Psychiatric Association, is available. Eight psychiatrists participated in the hour-long recording, which covers the roles of the psychiatrist and the general practitioner in aftercare; aftercare for children; and the threat of discharge without such care. Smith, Kline & French Laboratories, Philadelphia 1, Pa.

643. Virus film
Destruction of Living Human Cells by Virus Invasion, in full color, sound, and English narration, makes such destruction visible to the naked eye for the first time. Presented by the Eye, Ear, Nose & Throat Research Divisions of Doho Chemical Corp. with the cooperation of the Istituto Nazionale Luce and the Istituto Di Sanita of the Government of Italy, it is available on loan. Doho Chemical Corp., 100 Varick St., New York 13, N. Y.

644. Sterilization
New 123-page booklet is a compilation of the Becton, Dickinson Lectures on Sterilization presented as part of the curriculum in bacteriology at Seton Hall University College of Medicine and Dentistry. Lecture topics include the problems of sterilizing surgical equipment, heat, gaseous and chemical sterilization methods, the control of cross-infection, skin antisepsis, new horizons in sterilization and the control of sterilization procedures. Becton, Dickinson and Co., Rutherford, N. J.

A METHOD FOR DEVELOPING A MASTER STAFFING PLAN FOR THE NURSING SERVICE DEPARTMENT, by *Sister Mary Laura Gunn, R.S.M., R.N., B.S.N., M.H.A. St. Louis, Mo.: Catholic Hospital Assn. 75c each, or 3 copies for $2.*

Though the provision of adequate nursing service in hospitals has become increasingly difficult during the last decade, and staffing patterns have undergone marked change in the same period, not all of these problems and changes can be blamed on what has become a too ready excuse: "The acute nurse shortage."

From a past when student nurses together with professional graduates made up the backbone of hospital nursing care, there has emerged a whole set of new conditions and attitudes that calls for new approaches to staffing by effective utilization of a larger variety of professional and non-professional personnel.

Sister Mary Laura Gunn has painstakingly researched the effects on hospital nursing care patterns of war, of growth of hospitals, changes in medical practice and procedures, and acceptance of the concept that student nurses are in hospitals to learn, not to serve. She then makes an irrefutable case in her book to prove that these influences, together with introduction of a variety of trained though semi-skilled workers to the nursing team has confronted directors of nursing services with multiple problems that can be resolved only by applying sound management principles of planning. But she doesn't stop there.

The essay delves into the basic principles of sound management planning and shows how these can be put to effective use in preparing long- or short-range master staffing plans for both the nursing service as a whole and for its components. Utilizing the requirements of a typical 350-bed hospital, the author outlines methods of budgeting for and then of meeting staffing needs. She makes liberal use of a series of easily understood mathematical tables to illustrate the methods.

It would be hard to find a nursing administration office where this manual would not be welcomed as one of the most comprehensive analyses of the subject yet done, and as a useful tool to supplant or supplement current staff planning procedures.—*Carl I. Flath, principal John G. Steinle & Associates.*

DECISION MAKING IN HOSPITAL ADMINISTRATION AND MEDICAL CARE — A CASEBOOK *by James A. Hamilton, Minneapolis; University of Minnesota Press, 1960. 710 pp.*

Designed primarily for the beginning professional student in the academic period of university graduate program in hospital administration, this comprehensive work provides an abundance of hypothetical but highly realistic situations for study and analysis. Groups of cases, described in considerable detail, illustrate typical problems. Their major emphasis covers such areas as "Operating a Hospital," and "Determining the Need for Hospital Service Facilities," and such special topics as "The Needs of Selected Population Groups," "Human Relations" and "Integration of Services."

In a typical problem, the reader is told he is the "newly hired administrator of a 100-bed, general-acute hospital in a rural area." The character of the hospital is sketched: its general atmosphere, the personalities of the dominant individuals on the board of trustees, the quirks of important members of the medical staff, the manner in which the hospital is regarded by the community. The nature of a particular crisis is then outlined, with all relevant details supplied, much as these factors would be found in the mind of the administrator in actuality. Finally, the student is asked: "What action is most appropriate for you, the administrator, to take at this time? What factors did you consider in reaching this decision? What emphasis did you place on each? Why?"

Following this initial exercise, the student finds a list of a dozen or so questions exploring both his thought processes and his understanding of the situation in greater detail, e.g., "When is an administrative fiat a desirable way of meeting a problem of hospital-wide dimensions? When is it not desirable? What role should the medical staff play in hospital-community relations? Can relationships among hospital personnel, and between them and administration, be seen as a key to public relations problems? How can they be mobilized? Can a hospital raise its prices and improve public relations at the same time?"

Obviously, the contents of such a volume, if wisely and carefully employed in an educational setting, should have enormous value in supplementing and testing the academic training previously provided.

The aspiring administrator may find, in these cases, a fairly close approximation of the kind of dilemmas he can expect to encounter on the job. In this respect, the cases constitute admirable exercises with which he may test both the quality of the training he has had and his professional instincts for putting that training to use.

The author introduces a necessary *caveat* relating to the use of his work. The case-study method, he concedes, is time-consuming and must be timed to the student's growth. And, he adds, "the student may experience many frustrations from the use of a method which refuses to admit any right answer and offers many choices for correct solution." Nevertheless, the same method should enable the student to differentiate between "principles and opinions, to cultivate a realistic attitude and set of values, and to develop an administrative skill to a state of perfection not easily obtainable by employers within our field."—*Gerald Blank, senior associate, John G. Steinle & Associates.*

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holds fast before, during and after autoclaving ■ easily applied, sticks at a touch to paper, cloth, glass, metal ■ leaves no residue as with ordinary adhesive tapes ■ faster to use for binding than pins, string, cotton plugs ■ marks easily —with pen, pencil, typewriter ■ (note: nothing on the outside of an autoclaved item, of course, can guarantee sterility of the contents.)

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612. Bicycle exerciser
613. Bottle breaker
614. Thermal reproduction paper
615. Steel cabinet
616. Nitrogen analysis
617. Porto-Lift
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619. Tracheostomy tube
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621. Boil-proof funnel
622. Elevation block
623. Chart rack
624. Bench-top centrifuge
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626. Bedfast rinser
627. Wet-dry bottle cooler
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629. Training microscope
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*Bogash, R. C.; DeLa Chapelle, N.; Sowinski, R., and Downes, D.: Disposable Type Vials for Adding Medications to Large Volume Parenterals, Am. J. Hosp. Pharm. *17*:104 (Feb.) 1960.

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